1960

FLORIDA STATE BOARD OF HEALTH

1960

ANNUAL REPORT

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Annual Report

State Board of Health

State of Florida

1960

The following statistical reports will be published separately:
SUPPLEMENT I — FLORIDA VITAL STATISTICS, 1960
SUPPLEMENT II — FLORIDA MORBIDITY STATISTICS, 1960

WILSON T. SOWDER, M.D.
STATE HEALTH OFFICER
JACKSONVILLE, FLORIDA

The Honorable John D. Milton, M.D., President
Florida State Board of Health
Miami, Florida

Dear Dr. Milton:

I herewith submit the annual report of the Florida State Board of Health for the year ending December 31, 1960.

Sincerely yours,

WILSON T. SOWDER, M.D.
State Health Officer

May 1, 1961
Jacksonville, Florida

His Excellency, Farris Bryant
Governor of Florida
Tallahassee, Florida

Sir:

I beg to hand you herewith a report of the Florida State Board of Health for the period January 1, 1960, to December 31, 1960, inclusive.

Respectfully submitted,

JOHN D. MILTON, M.D.
President

May 1, 1961
Miami, Florida

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Members of the

FLORIDA STATE BOARD OF HEALTH

JOHN D. MILTON, M.D., *President*

Miami

T. M. CUMBIE, Ph.G.

Quincy

F. P. MEYER, SR., D.D.S.

St. Petersburg

SULLIVAN G. BEDELL, M.D.

Jacksonville

W. S. HORN, D.O.

Palmetto

OFFICIAL STAFF FLORIDA STATE BOARD OF HEALTH

December 31, 1960

DIRECTORS

State Health Officer.....Wilson T. Sowder, M.D., M.P.H.
Assistant State Health Officer.....Albert V. Hardy, M.D., Dr. P.H.
Assistant State Health Officer.....Clarence M. Sharp, M.D.
Personnel Officer.....Miles T. Dean, M.A.

Division of Health Information.....Elizabeth Reed, R.N., B.S.

Bureau of Finance and Accounts.....Fred B. Ragland, B.S.
Assistant Director.....Paul R. Tidwell, B.B.A.
Purchasing Agent .....G. Wilson Baltzell, B.S.

Bureau of Vital Statistics.....Everett H. Williams, Jr., M.S., Hyg.

Bureau of Local Health Services.....Wilfred N. Sisk, M.D., M.P.H.
Assistant Director .....Hubert U. King, M.D.
Division of Public Health Nursing.....Ruth E. Mettinger, R.N.
Division of Sanitation.....A. W. Morrison, Jr.
Nutrition Services.....Mary B. Deaver, M.S.

Bureau of Preventable Diseases.....James O. Bond, M.D., M.P.H.
Division of Radiological and Occupational Health.....Edwin G. Williams, M.D.
Division of Tuberculosis Control.....Dwight J. Wharton, M.D.
Division of Epidemiology.....James F. Molloy, M.D., Acting
Division of Veterinary Public Health.....James E. Scatterday, D.V.M., M.P.H.

Bureau of Special Health Services.....Simon D. Doff, M.D., M.P.H.
Division of Hospitals and Nursing Homes..
Division of Chronic Diseases.....James E. Fulghum, M.D., Acting

Bureau of Laboratories.....Nathan J. Schneider, Ph.D.
Miami Regional Laboratory.....Warren R. Hoffert, Ph.D.
Orlando Regional Laboratory.....Max T. Trainer, M.S.
Pensacola Regional Laboratory.....Emory D. Lord, Jr., B.S.
Tallahassee Regional Laboratory.....Robert A. Graves, M.S.
Tampa Regional Laboratory.....H. D. Venters, B.S.
West Palm Beach Regional Laboratory....Lorraine Carson

Bureau of Maternal and Child Health.....Lorenzo L. Parks, M.D., M.P.H.
Assistant Director .....Edward L. Flemming, Ed.D.

Bureau of Mental Health.....Wayne Yeager, M.D., M.P.H.
Assistant Director .....Melvin P. Reid, Ph.D., S.M. Hyg.

Bureau of Dental Health.....Floyd H. DeCamp, D.D.S.

Bureau of Entomology.....John A. Mulrennan, Sr., B.S.A.

Bureau of Sanitary Engineering.....David B. Lee, M.S. Eng.
Assistant Director .....Sidney A. Berkowitz, M.S. Eng.
Division of Water Supply.....John B. Miller, B.S., M.P.H.
Division of Waste Water.....Ralph H. Baker, Jr., M.S.S.E.

Bureau of Narcotics.....Frank S. Castor, Ph.G.

DIRECTORS OF COUNTY HEALTH DEPARTMENTS

(As of December 31, 1960)

Alachua	Edward G. Byrne, M.D., M.P.H.
Bay	A. F. Ullman, M.D.
Brevard	Albert O. Rossi, M.D.
Broward	Paul W. Hughes, M.D., M.P.H.
Collier	Clarence R. Pearson, M.D.
Dade	T. E. Cato, M.D., M.P.H.
Duval	Thomas E. Morgan, M.D., M.P.H.
Escambia	J. C. McSween, M.D.
Hillsborough	John S. Neill, M.D., M.P.H. (Acting)
Jefferson	Thomas S. Englar, M.D., M.P.H.
Lake	J. Basil Hall, M.D., M.P.H.
Lee	Joseph W. Lawrence, M.D.
Leon	Joseph M. Bistowish, M.D., M.P.H.
Manatee	Frederick K. Allen, M.D.
Marion	Patrick H. Smith, M.D.
Monroe	James L. Wardlaw, Jr., M.D., M.P.H.
Okaloosa	B. R. Provost, M.D.
Orange	W. N. Sisk, M.D., M.P.H. (Acting)
Palm Beach	C. L. Brumback, M.D., M.P.H.
Pinellas	William C. Ballard, M.D., M.P.H.
Polk	Chester L. Nayfield, M.D., M.P.H.
St. Johns	Charles L. Newberry, M.D.
Santa Rosa	A. E. Harbeson, M.D.
Sarasota	William L. Wright, M.D., M.P.H.
Seminole	Clyde L. Brothers, M.D.
Volusia	D. V. Galloway, M.D., M.P.H.
Baker-Nassau	James C. Loranger, M.D.
Calhoun-Jackson	Terry Bird, M.D., M.P.H.
Flagler-Putnam	James R. Sayers, M.D.
Gadsden-Liberty	B. D. Blackwelder, M.D., M.P.H.
Madison-Taylor	Charles L. Mattes, Jr., M.D.
Osceola-Indian River	C. C. Flood, M.D., M.P.H.
Pasco-Sumter	Charles E. Gill, M.D., M.P.H.
Bradford-Clay-Union	A. Y. Covington, M.D., M.P.H.
Charlotte-DeSoto-Hardee	E. J. McLaughlin, M.D.
Citrus-Hernando-Levy	Harold F. Bonifield, M.D., M.P.H.
Columbia-Gilchrist-Hamilton	W. N. Sisk, M.D., M.P.H. (Acting)
Franklin-Gulf-Wakulla	Henry I. Langston, M.D., M.P.H.
Glades-Hendry-Highlands	Raymond P. Srsic, M.D.
Holmes-Walton-Washington	W. N. Sisk, M.D., M.P.H. (Acting)
Martin-Okeechobee-St. Lucie	Neill D. Miller, M.D.
Suwannee-Dixie-Lafayette	J. Harland Paul, M.D., M.P.H.

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GENERAL ADMINISTRATION

W. T. SOWDER, M.D., M.P.H., State Health Officer
A. V. HARDY, M.D., Dr. P.H., Assistant State Health Officer
C. M. SHARP, M.D., Assistant State Health Officer

ADMINISTRATIVE ORGANIZATION

The organizational chart (Fig. 1) of the Florida State Board of Health summarizes plans for the administration of public health services in Florida. The 5-member Board, the State Health Officer and members of major advisory committees or councils are usually designated by the Governor or by the Board for specified periods. The Board, for which the State Health Officer serves as secretary, with the advice of advisory committees and councils, carries the authority for the establishment of policy. The responsibility for administrative operation rests with the State Health Officer, with the aid of 2 assistant state health officers, 2 attorneys (1 part-time), an auditor and 2 analytical assistants. The Bureau of Finance and Accounts, the Division of Health Information, the Personnel Office and the General Data Processing Unit serve also as essential components in the general administrative program.

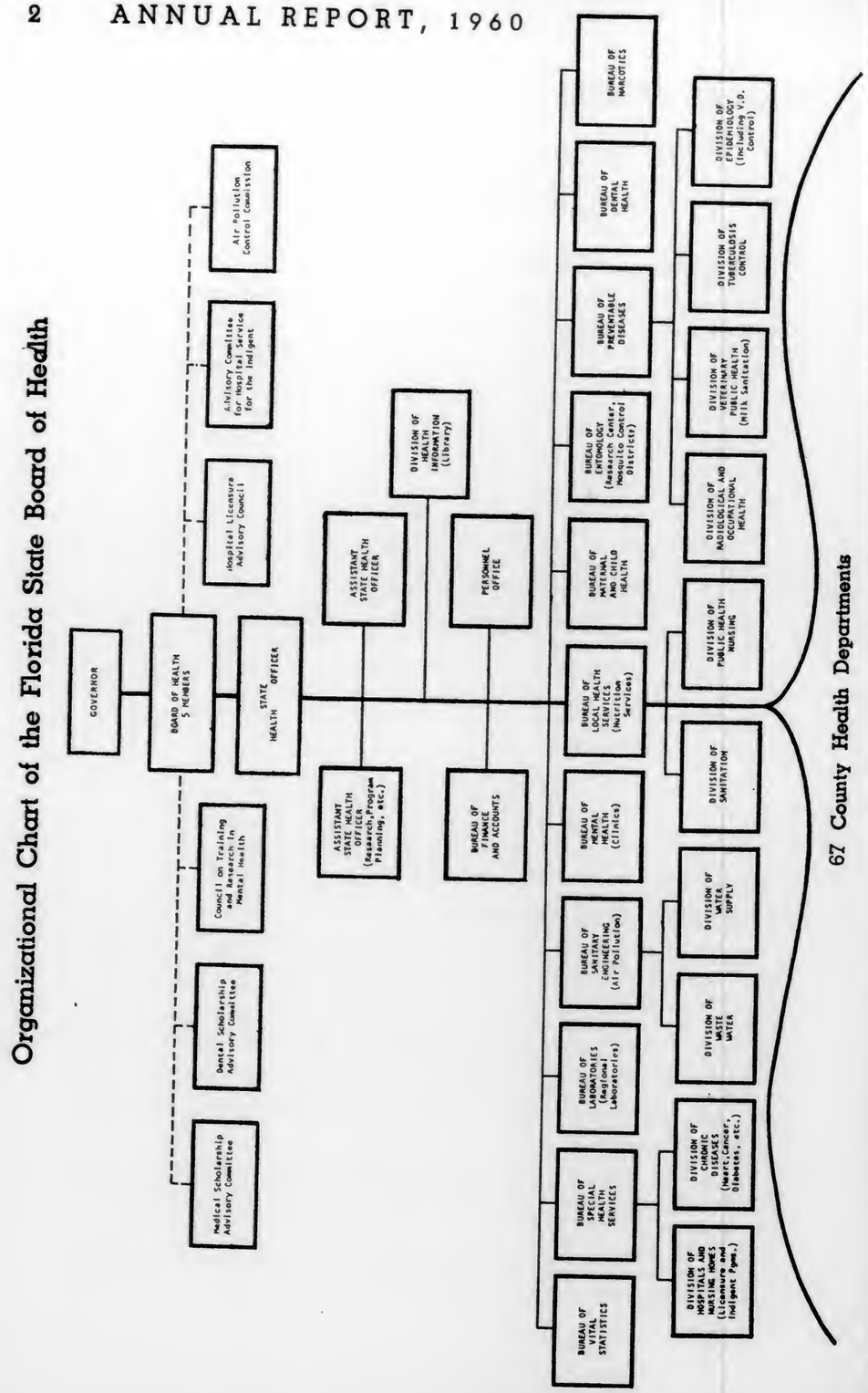
Four of the 7 advisory committees or councils relate closely to programs conducted by specific bureaus. Their deliberations are described with the work of the bureau concerned. The provision of medical and dental scholarships and training stipends recommended by the Council on Training and Research in Mental Health is considered as a part of the administrative program of the State Health Officer.

Administrative operation is guided and determined by the policy decisions of the State Board of Health. Following the record of the actions of the Board in 1960, there is a general description of the administrative actions involved in carrying out the policies of the Board and guiding the work of the total State Board of Health.

ADMINISTRATIVE OPERATION

Administrative operation centers in the office of the State Health Officer. The day-after-day activity involves voluminous correspondence averaging some 15 letters a day to outside agencies, plus many memoranda to the directors of bureaus and divisions and to county health departments. There are numerous telephone calls involving consultations on local, state and national problems. Some of those brought to the attention of the State Health Officer in correspondence, consultation or conference may be assigned to appropriate staff members for farther study or for handling.

Much of the time of the State Health Officer is utilized in conferences with staff members, county health officers, state representatives and senators, leaders of voluntary health organizations and citizens desiring to be heard. There are important conferences with the budget director and hearings with the State Budget Commission, the State Merit System Council or Personnel Board, and with legislative committees.



There are the contacts with the Office of the Governor. In these administrative activities requiring the attention of the State Health Officer, staff assistance as needed, is provided by those most familiar with the problem at hand.

During the year, decisions as to the best assignment for senior personnel were required. Dr. Lynn Parks was designated as director of the Bureau of Maternal and Child Health, Dr. Simon Doff as director of the Bureau of Special Health Services, Dr. Wilfred Sisk as director of the Bureau of Local Health Services, and Dr. Wade Stephens as director of the Kellogg Project. In each instance, a re-assignment was involved. The best arrangement for specific programs received detailed study. The organization of the radiological health work, for example, was carefully examined by staff with consultive assistance. There resulted a more specific assignment of responsibility to the Division of Radiological and Occupational Health, the Bureau of Sanitary Engineering and the Bureau of Laboratories. During the year, also, the operation of the Hospital Service for the Indigent Program received substantial attention by the State Health Officer and his staff. For a portion of the year, this program was operated under the immediate direction of the State Health Officer aided by an Assistant State Health Officer (Dr. C. M. Sharp).

Two health emergencies occurred during the year. The extensive damage caused by Hurricane Donna resulted in a disruption of sanitary facilities and health services which required immediate action. Staff members were assigned specific functions in the early rehabilitation period. The influx of Cuban refugees to south Florida also received emergency attention. Funds were re-allocated to provide for special clinic services and to make it possible to employ a professional Cuban staff to minister to the medical and health needs of their own people. Though initiated on an emergency basis, it has become apparent that this will be a continuing need.

The State Health Officer and/or assigned representatives attended the various advisory committees and councils. These meetings ordinarily involved preparation by staff of detail data for consideration. The State Health Officer attended scientific meetings in an official capacity, including the American Public Health Association, the American Medical Association, Florida Medical Association, the Florida Public Health Association, the American Association of Public Health Physicians, the National Health Council and the State and Territorial Health Officers' Association. The State Health Officer, during 1960, served as president of the Association of State and Territorial Health Officers, continued his service as a member of the Executive Board of the American Public Health Association, was a delegate at large to the National Health Council serving as a member of its Medical Care Committee, he was elected as chairman of the Section of Preventive Medicine of the American Medical Association and in the Public Health Service was a member of the Board of Editors of Public Health Reports and a consultant on chronic diseases and the health of the aged. He carried international

responsibility also, serving during the year as a member of the U. S. Delegation to the annual meeting of the World Health Organization in Geneva, Switzerland.

The Assistant Health Officers, in addition to aiding the State Health Officer as requested in the study of many problems, each are designated specific areas of responsibility. One (A. V. Hardy, M.D.) serves concurrently as coordinator of research, coordinator of training and provides leadership to studies of program development and evaluation. In the latter the major portion of the detailed work is carried by the staff of the Kellogg Project. He also has responsibility for the planning of regular staff meetings. The other (C. M. Sharp, M.D.) serves as director of the General Data Processing Unit, assists in the administration of the Hospitalization for the Indigent Program and, for a portion of the year, was acting director of the Bureau of Local Health Services.

In part, the administrative work is carried by committee action. During the year, a Budget Committee was designated, composed of the Assistant State Health Officers and the director of the Bureau of Finance and Accounts. These 3 devoted many hours to consultation with bureau and division directors. The budget, as finally presented and approved by the Board of Health, was the product of the estimate of needs by the program directors, and the recommendation of the Budget Committee, modified by decisions of the State Health Officer. Committees were designated also to select trainees to be recommended for support during an academic year of graduate study. In a less formal committee structure, the development of research involved group consultation and planning.

For a number of the administrative problems, legal advice and assistance is required. For this purpose, the service of 1 part-time and 1 full-time attorney is available. The year 1960 was the first in which the latter was available to provide general legal assistance. He joined the Board of Health in December 1959. The first 3 months he spent in local county health departments becoming fully familiar with the nature of their organization and problems. Additional time was required to become orientated to the varying problems of the different bureaus and divisions. Throughout the year, the service of the attorneys has been requested in the handling of a variety of problems, chiefly in the county health departments, the Bureau of Sanitary Engineering, the Bureau of Entomology, the Division of Sanitation and the Division of Hospitals and Nursing Homes. During the latter part of 1960, legal advice was provided in the field of air pollution and radiological health. To a lesser extent, the resident attorney provided guidance and advice in other administrative problems.

The internal auditor serves under the immediate direction of the State Health Officer. It is his major responsibility to assure that all financial matters are handled in conformity with state law and regulation. To this end, he conducts administrative reviews of financial records to determine that the actions of the bureaus, divisions and county health

departments are being carried out in accordance with the policies and procedures established by the State Board of Health, as well as with state and local laws. He serves in an advisory capacity to the directors of bureaus, divisions and county health departments on matters relating to budget, fee collections, internal control, purchasing, property control, the development and amendment of procedures manuals and other financial management matters.

A health program analyst assists the State Health Officer in a staff capacity with a wide variety of problems. During the past year, for example, he assisted in developing a group life insurance program which already is proving of substantial benefit to State Board of Health and County Health Department employees. He aided in extending the benefits of Blue Cross to our employees. He worked with representatives of the Florida Medical Association in further defining and developing medical care programs of mutual interest and concern. In response to need, he cooperated with particular program directors, as, for example, in developing a proposal to encourage churches to assume greater responsibility for the provision of services to the aged. He represented the State Board of Health on a State Milk Commission and provided staff assistance to the State Medical Advisory Committee. He gave major attention to legislative matters, aiding in reviewing and drafting bills and, more importantly, in effectively explaining these to state representatives and senators.

An additional member of the administrative staff, with a broad background in reporting and writing, assists with publicity related to administration, such as meetings of the State Board of Health. In addition to other staff responsibilities, she serves as historian. The American Public Health Association has urged that all State Health Departments maintain historical records of public health in their individual states, and accumulate past historical data of significance. Prior to this, a committee, of which the State Health Officer was chairman, had functioned in drawing together a history of the Florida Public Health Association. This already has been distributed to the members of the Association and others interested. The ongoing activities of the historian is to extend the historical research through drawing together information from private, public and institutional libraries and through interviews with individuals or their relatives who played important roles in the development of public health in Florida. This material is being filed preparatory to publishing a historical record illustrated with material either owned, loaned or donated to the State Board of Health. A part of that already collected has been prepared as an exhibit and was shown at the meeting of the Florida Public Health Association in 1960 and, on request, will be shown at the Southern Branch of the American Public Health Association. Thus, the heritage from the pioneer public health workers in Florida, to those presently in public health, is recorded and is being used.

ACTIVITIES OF THE BOARD

There were no changes in the personnel of the Board during the year 1960. Five meetings were held and the dates, places and the major items of business transacted were as follows:

February 9—Jacksonville

1. Adopted amendments to the Rules and Regulations governing administration of the Indigent Hospitalization Program.
2. Adopted rules or procedure for hearings in connection with the Hospital Licensure Program.
3. Adopted a minor amendment to Chapter VIII of the Sanitary Code.
4. Heard representatives of the Florida Optometric Association concerning screening and referral of school children for eye defects.
5. Adopted regulations for the control of toxic pesticides.
6. Adopted amendments and new rules pertaining to the Structural Pest Control Program.
7. Approved the employment of an architect to draw plans for a laboratory building for the Entomological Research Center at Vero Beach.
8. Met with the county health officers and heard their problems.
9. Reviewed the report of the State Auditor.
10. Approved a group insurance plan for employees and authorized the State Health Officer to enter into an agreement with the insurance company on this matter.
11. Approved agency membership by the State Board of Health in the American Public Health Association.
12. Decided to adhere to a long standing policy against the free distribution of scientific literature and periodicals to physicians.
13. Confirmed previous oral approval of a project on oral polio vaccine in Dade County.
14. Approved a proposed trip by Dr. Sowder, the State Health Officer, to Geneva, Switzerland as a member of the U. S. Delegation to the World Health Assembly meeting, May 3-20.

March 26-27—Entomological Research Center, Vero Beach

1. Heard explanations of the work of the Center given by Mr. John Mulrennan, director of the Bureau of Entomology, State Board of Health, and by Dr. Maurice Provost, director of the Entomological Research Center.

2. Following this, the Board spent the afternoon of March 26 touring the building and grounds and hearing staff members.
3. On March 27 the Board adopted revised regulations for the Cancer Control Program.
4. Approved rules and regulations submitted to the Board by the State Board of Beauty Culture except for 1 minor item.
5. Confirmed a long standing policy to the effect that death records in the Bureau of Vital Statistics should be considered confidential.
6. Approved changes in Chapter XX of the Sanitary Code and also adopted a new section, Chapter XXXV, of the Sanitary Code.
7. Designated Albert V. Hardy, M.D., as Acting State Health Officer during Dr. Sowder's absence in Europe, April 14-May 23.
8. Approved certain persons (listed elsewhere) for postgraduate training in public health during the academic year 1960-61.

June 19—Jacksonville

1. Adopted revision to Chapter XVI of the Sanitary Code on trailer camps.
2. Decided that cancer patients should continue to be hospitalized under the general program for the hospitalization of all types of indigent persons and that the State Board of Health should not seek separate funds for the hospitalization of cancer patients.
3. Heard a brief report by Dr. Hardy on the oral vaccine project in Dade County.
4. Decided not to use an Advisory Committee on Nursing Home Licensure at the present time.
5. Discussed a financial crisis in connection with the Indigent Hospitalization Program and approved a plan to hold a meeting with the county commissioners on this subject.
6. Approved plans for shifting certain key staff members within the organization.
7. Heard a report from the Chairman of the Air Pollution Control Commission and discussed air pollution control problems.
8. Adopted revisions of the Toxic Pesticide Regulations.
9. Authorized the State Health Officer to accept the low bid for the construction of the laboratory building at Vero Beach.
10. Approved the placement of responsibility for enforcement of the amended law on Food, Drugs, and Cosmetics in the Bureau of Narcotics.

11. Authorized Dr. Doff through the Bureau of Maternal and Child Health to spend up to $2000 of funds available from the U.S. Children's Bureau for the purchase of Lofenalac. This special food is used to prevent mental retardation in certain cases.

12. Approved the assumption by Dr. Brumback, Health Officer of Palm Beach County, of broader duties including certain welfare functions and the administration of outpatient clinics for medically indigent persons, administration of the county hospitals, etc.

August 27—Jacksonville

1. Approved basic rules for the State Board of Health's participation in seminars developed by Dr. Sharp.

2. Approved the appointment of Wilfred Sisk, M.D., as director of the Bureau of Local Health Services.

3. Approved a proposed budget submitted by Dr. Sowder for the Biennium 1961-63.

4. Reiterated a long standing policy not favoring the supplementation of salaries of employees and adopted a resolution to this effect.

November 19—Dade County Health Department, Miami

1. Toured the Dade County Department of Public Health and the Regional Laboratory of the State Board of Health.

2. Heard explanations of work by staff members of the Dade County Department of Public Health and by the State Board of Health's Regional Laboratory and regional personnel of the Bureau of Narcotics.

3. Discussed in some detail a recently passed federal bill to aid the states in the medical care of the aged. This bill is known as the Mills-Kerr Bill or Public Law 86-778.

   The Board instructed the State Health Officer to continue to study this bill and to work with other state agencies and the Legislative Council's Committee on Health and Welfare in developing appropriate plans for Florida's participation in this program.

4. Heard a report from Drs. Milton, Cato and Sowder concerning the Cuban refugee problem in Miami.

5. Discussed certain items of proposed legislation which were to be developed and presented at a future Board meeting.

RESEARCH COORDINATION

A. V. HARDY, M.D., Dr.P.H.
Assistant State Health Officer and
Coordinator of Research

Detailed reports on research in progress during 1960 are included as a part of the record of the bureau or division engaged in these studies. This is a summary report.

The Entomological Research Center in Vero Beach has continued its highly effective studies. During the year, facilities were expanded with the construction of a unit designed specifically to extend the studies of control procedures. There was added attention to the development of the related studies in Polk County. The Center received further recognition through the designation of its director as a member of the Study Section on Tropical Diseases and Parasitology of the National Institutes of Health.

A major research activity of 1960 was conducted in Dade County through the cooperation of the Health Department, the Medical Society and the Department of Preventive Medicine of the University of Miami Medical School. In this, the practicability of the wide-scale use of oral polio vaccine was examined, and the efficacy of the preparation available for use was evaluated. This investigation was under the immediate leadership of Drs. Eugene Flipse and George Erickson. Within a period of approximately 10 weeks, oral vaccine was administered to more than 400,000 residents, chiefly those under 40 years of age. The efficacy of the vaccine was examined by extensive serological studies and by exacting epidemiological observations. Though the general incidence of poliomyelitis was low in 1960, it appeared of significance that following the extensive use of vaccine, no case of poliomyelitis occurred throughout the remaining 7 months of the year. Moreover, virological studies, which prior to the campaign readily revealed the presence of polio virus in the community, gave negative findings in the months following the wide administration of the vaccine. In this study, particular attention was given to an examination of the factors which determined acceptance or rejection of a preventive medical procedure which was made readily and freely available. Preliminary findings of this study were presented at the second World Conference on oral polio vaccine convened by the World Health Organization. While the evidence encourages the belief that oral polio vaccine will be a highly effective procedure in the prevention of paralytic poliomyelitis and enteric infections due to polio viruses, nevertheless, it also became apparent that further progress to this end must await the availability in the United States of a duly licensed vaccine.

The Sarasota County Health Department embarked upon studies of an entirely different nature. It is increasingly recognized that alcoholism is a public health problem of substantial significance. The Florida Alcoholic Rehabilitation Program has demonstrated effectively the role of an inpatient therapeutic program, of outpatient clinic services

and of related educational activities. There is no experience, however, to guide county health departments in the evolution of effective programs for the control of chronic alcoholism. Through the year, this health department gave substantial attention to planning a pilot control program and investigation of this problem. With the consultative assistance of the State Board of Health social scientist, a psychiatric social worker from the Public Health Service, the director of the Alcoholic Rehabilitation Program and others, plans for the investigation were evolved and presented as a project grant request to the National Institute of Mental Health. Concurrently, a small study to provide baseline observations was planned and initiated, supported in part by a small grant from the Florida Council on Training and Research in Mental Health. It is anticipated that studies of this problem in Sarasota County will be a major productive demonstration project for several years.

Studies in Pinellas County, looking towards the development and evaluation of sound public health programs to meet the health needs of the aged, have progressed satisfactorily. Of particular significance, the community leaders are becoming increasingly aware of needs, and better organized to satisfy them. It appears evident that the activities underway are becoming an important ongoing service in the Pinellas County Health Department, which undoubtedly will continue after the supplementary support through a research grant is no longer available.

The second year of the investigation in Hillsborough County designed to lead to the most effective means of rehabilitating those returning from mental hospitals has been completed. The present program is operating smoothly. The effectiveness of the trial procedures are being critically evaluated through interviews of patients at the end of their first post-hospital year. Matched controls in Duval County, where no special program is underway, are being similarly studied.

Other studies in the counties include the Migrant Labor Project in Palm Beach County, the Developmental Evaluation Clinic for studies of the mentally defective and the long continued premature project in Dade County, all described in the report of the Bureau of Maternal and Child Health. There is also the School Mental Health Project in Seminole County, which is a responsibility of the Bureau of Mental Health. A number of small studies are in progress, such as that of the residents of retirement hotels in Dade County and an investigation of occupational therapy under volunteer leadership in a psychiatric ward of a general hospital. The combined product of these studies in health departments has not only provided new knowledge of particular importance in program development, it has also cultivated an inquiring approach to all public health activities.

At state level, there has been a continuation of the investigation of rabies, as described under the work of the public health veterinarian. This is a small but prolonged study. In 1960 plans were developed for experimental observations which will be initiated early in 1961. The investigation of infections due to unclassified mycobacteria was in its second year. Of particular significance is the increasing number of these

infections being identified, including extra-pulmonary infections, acute pulmonary disease, as well as the chronic tuberculosis-like pulmonary disease which is relatively resistant to chemo-therapeutic agents available for tuberculosis. Observations to date appear to establish that these infections are not spread from human to human and, presumably, are derived from some source in the environment. The soil is suspected, but bacteriological studies to date have failed to identify from this source mycobacteria with the characteristics of those isolated from human disease.

There has been a continuing interest in arthropod-borne virus infections. During the year, plans were developed looking towards a study of 3 or more years of these infections in Florida. A grant request was submitted, but at the time of writing no decision concerning this has been reported.

The fluorescent antibody diagnostic procedures continue to be an activity of interest in the Bureau of Laboratories. Its reliability in rabies has been so clearly established that the test has been recommended as a routine to replace animal inoculation. Since findings can be reported quite promptly, this test will serve to give an early indication of an urgent need for immunization, or the probable lack of need for these inoculations.

The Bureau of Sanitary Engineering has not undertaken investigations designated as research; however, many activities have involved special studies. This is particularly true in the air pollution control program and biological studies related to stream pollution.

The federal supplement to funds to be utilized for the improvement of care provided in nursing homes made it practicable to consider the development of studies in this area. During the latter part of the year, there was a series of conferences directed towards the planning of a comprehensive study of nursing needs in nursing homes. It is anticipated that these studies will be initiated during the first part of 1961 with funds currently available; however, studies may assume proportions requiring supplementary support through a research grant.

The studies of public health administration, supported through funds provided by the Kellogg Foundation, progressed during the year. Major attention was directed to the development, in association with program directors, of long-range plans for state level activities. Looking to the future, procedures for evaluation of programs at the local level received consideration. In this, the study group was aided substantially through a consultative visit by Miss Evelyn Flook of the U. S. Public Health Service.

A research training grant was initiated during the year, this currently providing for 2 trainees, 1 serving a public health residency and the other completing a public health residency and proceeding to a school of public health. The latter will return to Dade County to assume responsibility as chief of research activities in that county.

During the latter half of the year, the research program was substantially strengthened through the availability of Dr. John Wright, Professor of Public Health Administration, University of North Carolina School of Public Health. Though his interest and responsibility extended much beyond research projects, he gave generously of his time and the benefits of his experience, particularly in the development of studies under the Kellogg grant.

Articles by State Health Officer and Assistant State Health Officer:

Erickson, G. M., Flipse, M. E., Menzin, A. W., Clayton, L. B., Markush, R. E., and Hardy, A. V. "Preliminary report of epidemiological surveillance in a mass field trial with oral polio vaccine," *in* Second International Conference on Live Poliovirus Vaccines. Washington, D.C.: Pan American Health Organization and World Health Organization, 1960. Pp. 445-56.

Flipse, M. E., Erickson, G. M., Hoffert, W. R., Sigel, M. M., Schneider, N. J., Clayton, L. B., Menzin, A. W., Markush, R. E., Howell, F. Jr., Crossley, M. T., Cato, T. E., Hardy, A. V., and Evans, F. J. "A preliminary report on a large-scale field trial with oral Cox-Lederle attenuated poliomyelitis vaccine in Dade County (Miami), Florida, " *in* Second International Conference on Live Poliovirus Vaccines. Washington, D.C.: Pan American Health Organization and World Health Organization, 1960. Pp. 435-44.

Hardy, A. V. The Public Health Laboratory—Looking to the Future. Amer.J.Public Health, 50: 927-32, July 1960.

Sowder, W. T. Fragile male? . . . or more durable female? The All Florida Weekly Magazine, 8: 3, 10, Feb. 28, 1960.

SCHOLARSHIPS FOR PROFESSIONAL EDUCATION

The 1955 session of the Legislature created scholarships for the study of medicine, dentistry and the several disciplines concerned with mental health. Each program requires that the scholarship be repaid by a period of compensatory practice in an area that is in need of the scholarship recipient's professional training.

Forty thousand dollars a year is appropriated for scholarships for the study of medicine. The scholarships are awarded by the State Board of Health upon the recommendation of a 7-man advisory committee authorized by statute. The deans of Florida's 2 medical schools are exofficio members. The remaining 5 members are designated by the President of the Florida Medical Association. The 2 exofficio members were Dean George T. Harrell of the University of Florida and Assistant Dean John C. Finerty of the University of Miami. The 5 physicians designated by the Medical Association were Richard C. Clay, Miami; James T. Cook, Jr., Marianna; Homer L. Pearson, Jr., Miami; Melvin M. Simmons, Chairman, Sarasota; and Richard F. Sinnott, Fort Pierce. Eleven new scholarships for the study of medicine were awarded in 1960 and 29 previously awarded scholarships were continued.

Forty thousand dollars is appropriated annually for the award of scholarships for the study of dentistry. The statute provides that the State Board of Health award dental scholarships upon the recommendation of the State Board of Dental Examiners. The following dentists served on that Board in 1960: F. F. Farver, Miami Beach; Rupert H. Gillespie, West Palm Beach; S. Rush Haven, Executive Director, Jacksonville; J. M. Pepper, Chairman, Palm Beach; Frank T. Scott, Jacksonville; Robert Thoburn, Daytona Beach; R. P. Taylor, Jr., Secretary-Treasurer, Jacksonville; and C. J. Zimmerman, Vice Chairman, Ft. Myers. Nine new scholarships for the study of dentistry were awarded in 1960 and 22 scholarships awarded previously were continued.

Upon the recommendation of the Florida Council on Training and Research in Mental Health, scholarships or stipends are awarded by the State Board of Health each year for the training of residents in psychiatry, interns in clinical psychology, psychiatric nurses and psychiatric social workers.

Through the Federal Social Security Act of 1935, the State Board of Health receives federal funds which are used to provide stipends to the employees of the State Board of Health and its affiliated county health departments for specialized professional training. These stipends are awarded by the State Board of Health to its career employees who evidence potential for growth and service in specialized areas of public health.

Persons receiving scholarships in 1960 were:

MEDICAL

Scholarships Awarded in 1960:

Sylvester Barrington .....Sanford
Robert Maurice Blow.....Monticello
Mirion Perry Bowers.....Bascom
Rodney Lee Brimhall.....Jacksonville
Robert Whelchel Miles .....Chattahoochee
John Agustine Moore.....Miami
Cupid R. Poe.....Sarasota
Frederick Oliver Smith..St. Petersburg
Paul Vincent Sullivan..Ft. Lauderdale
Shirley Rose Simpson.....Ft. Pierce
Tommie Lynn Thomas.....Bushnell

Continuing Scholarships Awarded Prior to 1960:

Awarded 1957:

Robert Edwin Allen, Jr.
Hoyt Horne
Edwin Keenan House, Jr.
John Franklin Mason, Jr.
Ronald Joseph Scheib
Richard Burke Welch

Awarded 1958:

Jarrett Charles Black
Robert Elliott Blakey
William Edwin Braun
Karl George Gerlach
Edward Richard McDonough
Lawrence E. Newman
Troy E. Overstreet
Lawrence Donald Porter
Ralph E. Reed
Earl Taylor
Raymond Charles Walker
Robert Paul Whittier
George Allen Williams

Awarded 1959:

Robert Allen Boudet
Gordon Thomas Couch
James Edward Davis
Francis Thomas Greene
Everett Norwood McCormick
William Michael McGaw
Howard Wayne Ramsey
John Wayne Ross
Wilbur Williams, Jr.
Lawrence Delano Kelley

DENTAL

Scholarships Awarded in 1960:

Teddy Wallace Brown.....Jacksonville
Edward Martin Clayton....Monticello
Harold Glennwood Gregg....Mt. Dora
Emmet Alfred Kirksey .....West Palm Beach
Lorenza Laws .....Ormond Beach
Charles H. Ritter .....Marianna
Earl Thomas Sherman.....Gainesville
Allen R. Treadwell..West Palm Beach
Theodore C. Wilson.....Wildwood

Continuing Scholarships Awarded Prior to 1960:

Awarded 1957:

Richard Kingsley Ames
Peter B. Mills
Bennie Thompkins
Harold Thomas Wilson

Awarded 1958:

Alvin Bayer, III
Wilbur Knox Collins
Raymond William Gage, II
James Emmett Mongoven
Van Rudolph Robinson
Oran Lloyd Turner, Jr.
Parnick Austin Williams

Awarded 1959:

George W. Alexander
Parris Brown
Robert A. Brown
Gene Watkins Eng
Robert G. Fountain
Paul Vonbose Ladd
Daniel Gordon Noland
Thomas Melvin Scott
Marlin Drant Walker
Norman H. Hudon
Harold D. Jordon

MENTAL HEALTH

RESIDENTS IN PSYCHIATRY

Wilford M. Provo (Comptd. Nov. 1960).....Miami
Theodore M. Wolff (Started Nov. 1960) .....Tampa
Martin Rosenthal .....Miami
Herbert C. Anderson .....Miami
William H. Geiger .....Miami
Ronald A. Shellow .....Miami
Paul B. Hamilton .....Miami
Ralph O. Maercks .....Coral Gables
William L. Gustafson .....Miami

CLINICAL PSYCHOLOGY

Morris Lee Eady .....Bushnell
William G. Murdy .....Gainesville
Alan W. Rusnak .....Miami Beach
Eve Lyn Weeks .....Coral Gables
Donald B. Clark.....Ft. Lauderdale
Nathan W. Perry, Jr.....Tallahassee
Benjamin F. Gillis.....Tallahassee
Charles G. Wood.....Tampa

PSYCHIATRIC NURSING

Martha Beth Hicks.....St. Petersburg
Hattie Bessent .....Jacksonville
Helen G. Kocik .....Miami
Elma E. Kykes .....Miami
Joan M. O'Brien .....Tallahassee

PSYCHIATRIC SOCIAL WORK

First Year

Roy L. Allen.....Bartow
Carol Sue Brady .....Orlando
Barbara E. Holland.....Miami
Veda Joeger .....Lakeland
Norman G. Middleton, Jr.....Miami
Elizabeth M. Pickel.....Ft. Myers
Donald M. Snyder .....Tallahassee
James W. Strayer .....Lakeland
Alfred J. White.....St. Petersburg
Eldred R. Bratsen .....Miami

Second Year

Edwin C. Bowers .....Tallahassee
Annabel M. Brantley.....Key West
Ellen May Ellis.....Lakeland
Robert R. Furlough.....Tallahassee
Allyn D. Gibson .....Lakeland
William A. Proctor.....Ft. Lauderdale

PUBLIC HEALTH PERSONNEL

William F. Hill, M.D.....Health Officer II.....Highlands
N. C. Alexiou, M.D.....Health Officer III.....Maternal & Child Health
Lewis Clayton, M.D.....Health Officer II.....Dade
H. S. Hudson, M.D.....Health Officer III.....Pinellas
R. E. Kaufman, M.D.....Health Officer I.....Palm Beach
D. R. Miller, D.D.S.....Public Health Dentist I.....Volusia
Harriet Brooks, R.N.....Public Health Nurse II.....Citrus
Louise Yopp, R.N.....Public Health Nurse III.....Pinellas
E. Dorothy Mullen, R.N...Public Health Nurse II.....Pinellas
Caroline Kennedy, R.N..Public Health Nurse II.....Sarasota
Ada E. Larkins, R.N.....Public Health Nurse II.....Hillsborough
Mary L. Card, R.N.....Public Health Nurse II.....Seminole
Kenneth Manuel.....Sanitarian II.....Polk
Howard Patton.....Sanitarian II.....Broward
James F. Spade.....Sanitary Engineer I.....Dade
James E. Santarone.....Sanitary Engineer I.....Sanitary Engineering
J. F. Gorman.....Psychiatric Social Worker IV...Mental Health
Kent S. Miller.....Clinical Psychologist IV.....Leon

PERSONNEL

MILES T. DEAN, M.A.
Personnel Officer

Under the general direction of the State Health Officer, the Personnel Office is responsible for the administration of the personnel program of the State Board of Health. This includes advising administrative officers concerning personnel practices and development; putting into effect procedures for carrying out approved personnel policies; participating in the preparation and administration of the approved Classification and Compensation Plan; administering the leave regulations; maintaining adequate personnel records on all persons employed in the agency; acting as liaison official with the Florida Merit System involving requests for certificates and reporting on the selection of eligibles, promotions, salary advancements, salary adjustments, demotions, transfers, dismissals, lay-offs and resignations; providing and administering a service rating system; and the preparation of necessary reports both state and federal. Payroll operation, also a responsibility of this office, includes the administration of leave accounting, employee insurance program, retirement and Social Security, as well as the preparation of the administrative payroll and distribution of warrants. Preparation of the salary portion of the legislative and operational budgets is also a responsibility of the personnel office.

Problems in connection with salary administration continued to be of great concern during the year. Pay range recommendation changes were submitted to the Merit System. After pay survey information was obtained, pay ranges were again reviewed in detail with the Merit System Office, including presentation to the Merit System Council.

The restriction on salary advancements placed upon each position was one of this office's biggest problems during the year. Difficulties

arose, not only from the restriction on salaries, but also from the restriction on the number of positions. Position limitation was especially binding upon the county health departments that received additional monies from local sources for increase in staff during the biennium. Necessary work in connection with salary restrictions of the Appropriations Act consumed much time of the personnel office and staff.

Classification problems continued to be at a high level and several revisions and additions were made to the Classification Plan.

During the year, considerable change and improvement was made in the employee insurance coverage. A survey was completed at the beginning of the year changing the Blue Cross insurance coverage to a $14.00 a day hospital room allowance. Before this was completed, the campaign to enlist enrollment in the group life insurance was commenced and this insurance program became a reality. Prior to the completion of all the needed action covering this addition, the Blue Cross-Blue Shield coverage was increased to include preferred and extended coverage.

A great deal of time was given during the year to payroll revision and consolidation. With the cooperation of the Data Processing Unit, procedures were developed for changed payroll procedure. Additions to be made in this connection will be in personnel statistics and leave accounting on a current basis.

Terminations during the year increased to 453; employment papers for 609 new employments were processed.

Postgraduate training was completed by 11 employees and 17 additional persons were placed on postgraduate training status.

TABLE 1

NUMBER OF EMPLOYEES IN THE STATE BOARD OF HEALTH AND COUNTY HEALTH UNITS AS OF DECEMBER 31, 1951 - 1960

Year (As of Dec. 31)	*State Office*	*County Health Departments*	*Total Employees*
1960	604	1534	2138
1959	586	1396	1982
1958	558	1321	1879
1957	528	1234	1762
1956	481	1127	1608
1955	442	1057	1499
1954	421	980	1401
1953	439	928	1367
1952	458	895	1353
1951	434	831	1265

TABLE 2

DISTRIBUTION OF PERSONNEL—STATE BOARD OF HEALTH (OTHER THAN COUNTY HEALTH DEPARTMENTS) DECEMBER 31, 1960

ADMINISTRATIVE UNIT	Totals	Physicians	Sanitarians	San. Engineers	Public Health Nurses	Lab. Workers (Prof. & Tech.)	Clerical	All Others
Grand Total	604	20	16	30	22	118	181	217
Administration: SHO	21	5					8	8
Administration: Personnel	12						9	3
Administration: Data Processing	17						7	10
Administration: Total	50	5					24	21
Dental Health	7						2	5
Finance and Accounts: Fiscal	12						7	5
Finance and Accounts: Purchasing and Property	39						5	34
Finance and Accounts: Total	51						12	39
Health Information	13						6	7
Laboratories: Central (Jacksonville)	60					39	7	14
Laboratories: Miami	21					15	2	4
Laboratories: Orlando	7					3	1	3
Laboratories: Pensacola	8					4	1	3
Laboratories: Tallahassee	6					3	1	2
Laboratories: Tampa	19					10	2	7
Laboratories: West Palm Beach	6					4	1	1
Laboratories: Total	127	1	1	1		78	15	34
Local Health Services: Bureau	9						6	4
Local Health Services: Nutrition	5				13		1	
Local Health Services: Nursing	15	1	6	1	13	1	2	4
Local Health Services: Sanitation	8	5	7		6		2	6
Local Health Services: Total	37	1	2		1		11	9
Maternal and Child Health	24	5					4	11
Mental Health	19	1					8	
Narcotics	14	2					3	
Preventable Diseases: Bureau	7	1					2	
Preventable Diseases: Radiological and Occupational Health	8	2					2	12
Preventable Diseases: Tuberculosis Control	23			1		3	9	7
Preventable Diseases: Venereal Disease Control	10					4	3	
Preventable Diseases: Epidemiology	2					2	2	
Preventable Diseases: Veterinary Public Health	5					2	2	1
Preventable Diseases: Total	55	5	2	1		7	20	20
Sanitary Engineering	63		2	27		11	17	6
Special Health Services: Bureau and Hospitals and Nursing Homes	16	1	1			1	9	6
Special Health Services: Chronic Diseases	10	2	1		2	1	3	1
Special Health Services: Total	26	3	2	1	2	20	12	7
Entomology	75						10	42
Vital Statistics	43						37	6

TABLE 3
DISTRIBUTION OF PERSONNEL IN COUNTY HEALTH DEPARTMENTS—DECEMBER 31, 1960

COUNTY	Totals	Physicians	Sanitarians	Sanitary Engineers	Public Health Nurses	Lab. Workers (Prof. & Tech.)	Clerical	All Others
Grand Total	1,534	76	290	15	522	5	322	304
1. Alachua	37	3	6		12		6	10
2. Baker	3		1		1		1	
3. Bay	15	1	3		4		2	5
4. Bradford	5		1		2		1	1
5. Brevard	33	2	6	1	9		11	4
6. Broward	70	2	13	2	22		18	13
7. Calhoun	4		1		1		1	1
8. Charlotte	5		2		2		1	
9. Citrus	7	1	1		2		1	2
10. Clay	7	1	2		2		1	1
11. Collier	12	1	1		4		3	3
12. Columbia	6		2		2		1	1
13. Dade	238	11	52	3	104		44	24
14. DeSoto	5	1	1		1		1	1
15. Dixie	3				1		1	1
16. Duval	44	1	7		14		10	12
17. Escambia	54	2	10		15		17	10
18. Flagler	4		1		1		1	1
19. Franklin	6	1	1		1		1	2
20. Gadsden	14	1	3		6		2	2
21. Gilchrist	2				1		1	
22. Glades	1						1	
23. Gulf	5		1		2		1	1
24. Hamilton	4		1		1		1	1
25. Hardee	5		1		2		2	
26. Hendry	7		2		3		2	
27. Hernando	2				1		1	
28. Highlands	9	1	2		2		1	3
29. Hillsborough	160	8	31	2	54	1	29	35
30. Holmes	5		1		2		1	1
31. Indian River	11	1	2		5		2	1
32. Jackson	14	1	2		5		2	4
33. Jefferson	7	1	1		1		1	3
34. Lafayette	4		1		1		1	1
35. Lake	18	1	3		7		4	3
36. Lee	14	1	3		5		3	2
37. Leon	33	2	5		9		8	9
38. Levy	5		1		2		1	1
39. Liberty	2				1		1	
40. Madison	7	1	1		2		2	1
41. Manatee	20	1	5		6		4	4
42. Marion	15	1	3		5		2	4
43. Martin	5		2		2		1	
44. Monroe	17	1	2		5		4	5
45. Nassau	13	1	2		3		3	4
46. Okaloosa	15	1	2		4		2	6
47. Okeechobee	3		1		1		1	
48. Orange	76	2	12	1	22		19	20
49. Osceola	5		1		2		2	
50. Palm Beach	74	6	12	1	23		15	17
51. Pasco	5	1	1		2		1	
52. Pinellas	131	5	24	2	49	3	26	22
53. Polk	77	3	13	1	27		14	19
54. Putnam	11	1	2		4		3	1
55. St. Johns	10	1	2		3		2	2
56. St. Lucie	15	1	5		2		3	4
57. Santa Rosa	10	1	2		3		1	3
58. Sarasota	42	2	8	1	13		12	6
59. Seminole	16	1	3		6		2	4
60. Sumter	4		1		1		1	1
61. Suwannee	9		2		3		3	1
62. Taylor	4		1		1		1	1
63. Union	3		1		1		1	
64. Volusia	54	2	9	1	17	1	7	17
65. Wakulla	2				1		1	
66. Walton	6		1		2		1	2
67. Washington	5		1		2		1	1

TABLE 4
TURNOVER BY CLASSIFICATION OF THE FLORIDA STATE BOARD OF HEALTH—STATE & COUNTY CALENDAR YEAR 1960

	TERMINATION	TURNOVER RATE
Physicians	19	23.8%
Sanitary Engineers	3	7.1%
Sanitarians	15	5.3%
Public Health Nurses	104	19.8%
Laboratory Workers (Prof. & Tech.)	11	9.2%
Clerical	140	20.9%
All Others (Including Laborers)	161	30.5%
Total	453	21.9%

Based upon employment at mid-year (July 1960)
1960 turnover rate 21.9%
Average monthly turnover 37.8
Monthly turnover rates are available

GENERAL DATA PROCESSING UNIT

ARNOLD KANNWISCHER, B.S.
Procedures Director

This unit consists of 3 sections: the statistical section, the IBM machine section and the inactive records section. It serves all other bureaus and divisions within the State Board of Health. Its function is to assemble raw information, process it and then produce refined statistical and fiscal information.

The varied and expanded health programs within the State Board of Health, as well as the rapid growth of Florida, have led to an equally large production and accumulation of paper work. This has required a continuing increase in the mechanization of many of the manual record keeping procedures. This unit now processes approximately 94 programs in the IBM and Statistical Sections. These include 1 or more programs for almost every bureau or division of the State Board of Health.

The following are some of the major activities and services rendered by the General Data Processing Unit:

VITAL STATISTICS

The processing of all the vital records included in 1960, 115,610 births, 47,719 deaths, 39,315 marriages, and 19,511 divorces and annulments. Information from these records were coded and transferred into

punch card format, from which are derived the statistics compiled and published in the Annual Report, the Vital Statistics Annual Report, Supplement No. I, and the Monthly Vital Statistics Report.

During the course of a year the State Board of Health receives countless outside requests for statistical information which is channeled to this unit and released upon the approval of the director of the Bureau of Vital Statistics.

BUREAU OF PREVENTABLE DISEASES

The above bureau received during 1960, 83,422 communicable disease reports. All these reports were processed by this unit and the data developed were published in the following major reports: the Weekly Morbidity Report, the Monthly Communicable Disease Notes and the Annual Morbidity Report, Supplement No. II.

SPECIAL HEALTH SERVICES AND INDIGENT HOSPITALIZATION PROGRAM

During 1960, 28,237 approved applications for indigent hospitalization were processed. From this fiscal information many statistical tables were requested, such as age of patients, length of hospitalization, average cost per admission, etc. Also tabulated for this bureau are monthly listings of cancer deaths, rheumatic fever deaths, reportable diseases and the semi-annual poison control register.

RESEARCH AND SPECIAL STUDIES

Listed below is a brief summarization of some of the major studies undertaken or completed in 1960.

Hospital Survey: Data on all patients 65 years or over who were hospitalized on November 10, 1960 in Florida. Also requested were data on this age group who were discharged from Florida hospitals during the week of August 14-20, 1960. This required the processing and analyzation of data on 3450 patients.

Physician Survey—Dade County: 2 phases of a 4-phase study were processed in this office in 1960. This study will require the processing of over 12,000 survey forms.

Pinellas County Gerontology Study: The General Data Processing unit processed approximately 8000 forms related to the individual health status of the aged in this community.

Epidemiological Investigation of Atypical Acid-fast Infection: A complete series of cross-tabulations was performed on approximately 500 cards. This is a continuing study of cases of this disease in the Florida population which are being subjected to detailed analysis.

Jackson County Immunization Survey: A survey of 550 persons of this community was made to determine the immunization level for poliomyelitis and smallpox.

Neonatal Study: This is a matching study begun in 1960, which will compare birth and death records for neonatal deaths occurring in 1960.

Live Oral Polio Vaccine Study—Dade County: This unit assisted in this study which was designed to determine the underlying sociological and economic factors effecting the take or non-take pattern of this community.

PERSONNEL DIVISION

A major conversion of records processing took place in this division in 1960. All payroll calculations and tabulations as well as leave accounting and personnel statistics were programmed for IBM machine handling.

NARCOTICS

The work for this bureau consisted mainly of 2 large registration procedures: the registration of 9396 practitioners of the healing arts and the mailing and processing of applications for registration of approximately 12,000 manufacturers of drugs, cosmetics and devices.

FINANCE AND ACCOUNTS

The work processed for this bureau included reports on workman's compensation, salary budget projections, tabulations on expenditures, travel and county receipts. Property inventory was successfully converted to punch card methods during this year.

MENTAL HEALTH

The reports submitted by the Child Guidance and Community Service Mental Health Clinics on patients clinically discharged are processed on a monthly basis by this unit. From these reports, calendar year as well as fiscal year statistical data are prepared. More than 7000 discharges were processed in 1960.

LOCAL HEALTH SERVICE

Numerous requests for statistical information for specific counties and communities were prepared during the year. A major undertaking of this unit was the study of the feasibility of automating the daily activities reporting of the various disciplines in the county health departments.

MATERNAL AND CHILD HEALTH

A monthly maternal death listing as well as an annual listing is prepared for this bureau.

SANITARY ENGINEERING

Installation of a new filing system was undertaken this year. This unitized-geographic system consolidated the search for documents to 1 file location rather than the 10 or more locations under the old system.

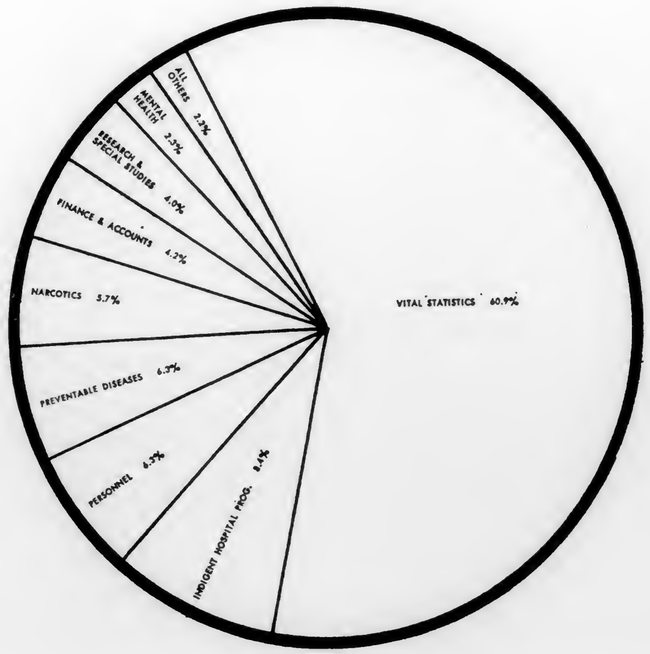
DENTAL HEALTH, HEALTH INFORMATION, ENTOMOLOGY

No major studies or machine work was performed for these bureaus.

Graphic representations show the distribution of machine utilization by bureau (Figure 2) and man-hour distribution of all General Data Processing Unit personnel by bureau (Figure 3) for the year.

The Inactive Records Section has undertaken the responsibility of establishing a microfilm program. This has already afforded the State Board of Health a substantial savings, especially since no new equipment, such as cameras, had to be purchased. Formerly, most of the microfilming work was sent out and done on a contractual basis; whereas now, all of it is performed within the State Board of Health.

FIGURE 2
DATA PROCESSING MACHINE UTILIZATION BY BUREAU
FOR THE YEAR 1960



Bureau	*Man Hours*	*Percent*
Vital Statistics	10,222.6	60.9
Indigent Hospitalization Prog.	1,416.3	8.4
Personnel	1,053.9	6.3
Preventable Diseases	1,006.4	6.3
Narcotics	951.1	5.7
Finance & Accounts	701.3	4.2
Research & Special Studies	673.8	4.0
Mental Health	387.8	2.3
All others	370.4	2.2
Total	16,783.6	100.0

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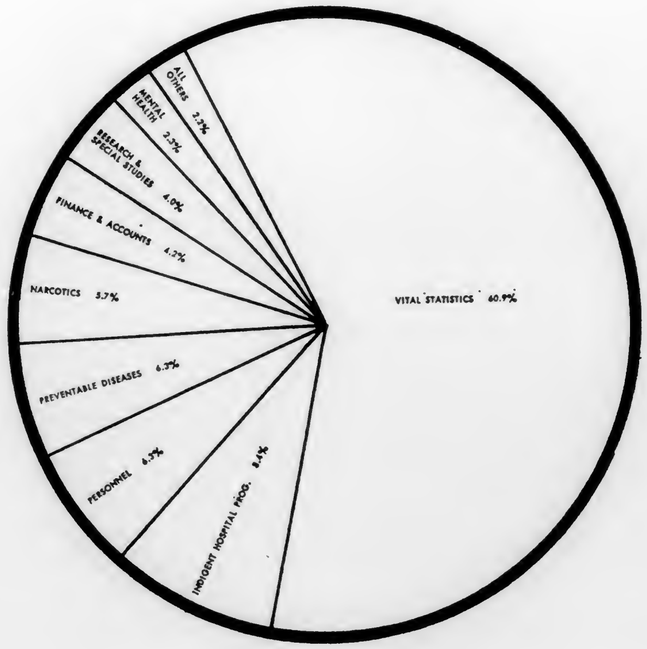

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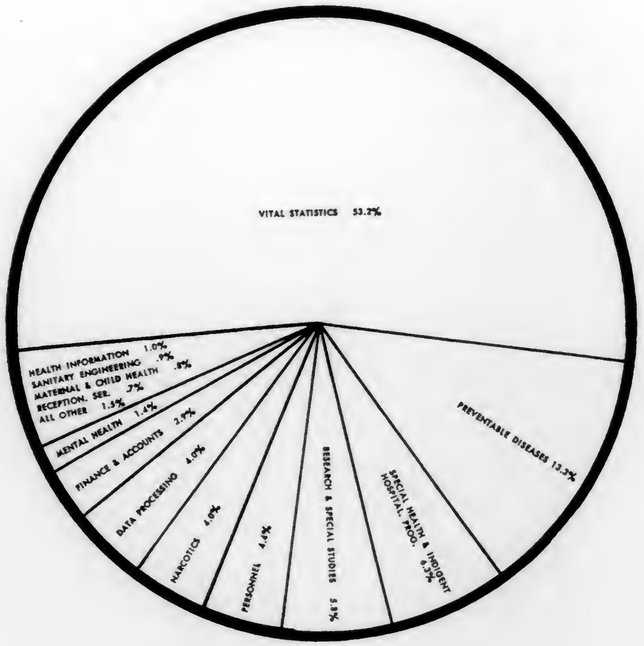
FIGURE 3
GENERAL DATA PROCESSING UNIT
TOTAL MAN HOUR UTILIZATION BY BUREAU
FOR THE YEAR 1960



Bureau	*Man Hours*	*Percent*
Vital Statistics	16,107	53.2
Preventable Diseases	4,027	13.3
Special Health & Indigent Hosp.	1,901	6.3
Research & Special Studies	1,759	5.8
Personnel	1,323	4.4
Narcotics	1,216	4.0
General Data Processing Unit	1,182	4.0
Finance & Accounts	868	2.9
Mental Health	423	1.4
Health Information	316	1.0
Sanitary Engineering	278	.9
Maternal & Child Health	232	.8
Receptionist Service	205	.7
All other	450	1.5
Total	30,287	100%

DIVISION OF HEALTH INFORMATION

ELIZABETH REED, R.N., B.S.
Director
TOMMA PASTORETT, B.S., M.A.
Librarian

The function of this division is to assist in the initiation, implementation and evaluation of the health education aspects of programs developed by bureaus and divisions, and county health departments; to cooperate with schools (on all levels) and with official and voluntary agencies; and to serve as a resource to the general public.

The division is concerned with optimum use of staff health educators on the local and state level; with exhibits, audio-visual aids, pamphlets, publications, press releases, the medical library as well as other media. Orientation of lay and professional persons to public health problems is also a major activity.

Bureaus and divisions and county health departments are constantly stimulated to have a greater appreciation of health education as an integral part of their total program. More time was spent in consultation with directors of the above than in previous years. Nine counties (Pinellas, Hillsborough, Manatee, Sarasota, Polk, Brevard, Palm Beach, Dade, Broward) have 10 positions for local health educators. One was not filled at the end of the year (Dade). A health educator was also assigned to the Florida Cervical Cytology Project. Assistance was given to the Florida Alcoholic Rehabilitation Program in the employment and orientation of a health educator for their staff, and to the health educator assigned to the Florida Cervical Cytology Project (see report of Division of Chronic Diseases elsewhere in this volume.) A great deal of correspondence was carried on with health educators inquiring about positions in the state. Unfortunately, the present pay ranges in Florida do not attract a large number of well-qualified candidates.

The *exhibits* consultant was unable to answer all of the increasing number of requests made of him for assistance in planning and designing displays as well as servicing those shown at statewide meetings. Forty-one displays or exhibits were constructed, 318 signs, charts, maps, layouts, and 114 illustrations completed and 50 planning conferences were held. He traveled to 22 different parts of the state.

Audio-visual aids continued their brisk circulation with aids other than 16 mm films (filmstrips, slides, tape recordings, etc.) continuing to rise in popularity. These constituted 10 per cent of all aids circulated—total 6149—which were shown 11,220 times. Over half a million persons viewed these aids to health education. Several films were shown to television audiences which totalled approximately three-quarters of a million. A new catalog was prepared and distributed. Projection equipment was booked by State Board of Health personnel 269 times. Much time is spent in instructing borrowers how to care for this equipment correctly.

Pamphlets continue to be popular with over 250,000 distributed during the year, in spite of the fact that quantity distribution is now restricted and free ones must be ordered directly from the publisher (except for sample copies). Mental health and nutrition are the two most popular subjects, although pamphlets on safety and adolescent problems are frequently requested. Child care and development continues to hold interest for many as do the chronic diseases.

A present problem is the inquiries received from 8th and 9th grade students for information on such subjects as child psychology, multiple sclerosis, genetics, how to do a skin graft. These apparently are the result of assignments by teachers or interest in science fair projects.

Florida Health Notes continued to attract a steady stream of new readers. Approximately 13,500 copies were distributed every month (except July and August). Subjects covered in 1960 included Migrant Project 1959, the Brevard County Story, Sick Child in School, Radiation, Stroke, Food Fads, Swimming Pools, Poison, Help for the Troubled Mind and a simplified Annual Report.

The mailing list was cleared in the fall. Over 53 per cent of the readers asked to be retained on the mailing list. New names were solicited from the county health departments and the revised list will eventually exceed the old in the total number of persons receiving this publication. The majority of readers are lay persons.

Assistance was given with the editing and distribution of the *Annual Report*. The *Florida Health Intelligencer* was issued 4 times. It is a mimeographed bulletin primarily concerned with news of individuals in Florida's public health circles. Some assistance was given to bureaus and divisions in the preparation of 3 other publications: *Timely Topics, Living in Later Years* and *Nutrition in a Nutshell.*

A total of 100 *press releases*—statewide, regional and local—were prepared and distributed. Arrangements were made for television, radio and press coverage of many meetings, conventions, seminars and conferences held principally in Jacksonville. The information consultant encourages reporters to write their own stories and then puts them in touch with State Board of Health resource persons.

The medical *Library* continued to serve an increasing number of persons. State Board of Health personnel form the largest number of users followed by physicians in the Jacksonville area. Statistically, 2678 books were loaned; 10,451 journals were circulated; 2838 reference questions answered. Forty-one bibliographies were prepared.

A new project was begun in 1960: compilation of a bibliography of articles written by State Board of Health personnel. As of this date over 350 titles have been listed.

Duplicate books and journals were offered to other libraries through the Medical Library Association Exchange. A total of 1590 journals and 31 bound volumes was sent to 145 libraries, 19 of these in foreign countries. Additional material was sent to the International Library at Kenitra, Morocco.

Three regular and 1 special orientation programs were held with approximately 200 persons attending. Staff members participated in the State PTA Institute and local PTA workshops.

Many talks were made to lay and professional organizations. A number of bureaus and divisions were assisted in arranging workshops and meetings. The division participated in the Teachers Project which is held each summer (see report of the Bureau of Maternal and Child Health elsewhere in this volume). Contacts are maintained with official and voluntary agencies which have an interest in health, as well as various professional groups (medically-related and others). Visits have been made to many educational institutions. Lectures were given to all students in health education classes at Florida State University.

Expansion seems indicated as brought out in preliminary studies of a long range plan for the division. Included are: more consultative assistance should be offered the bureaus and divisions and the county health departments. The latter might best be served by the employment of a field consultant and regional health educators. There should be acceleration of health career recruitment. The purchase of a health exhibits trailer should be considered. Additional assistance should be given to the audio-visual library in view of the many requests which cannot be met, both in the purchase of additional aids, as well as the employment of an additional technician. Regular programs and news spots should be prepared for educational and commercial television stations. Regional workshops are suggested to explore the environmental and cultural factors of people within these areas which influence the health education methods and techniques used. The 24 community colleges should be aided in identifying local public health problems and in locating resources for studying them.

Article by staff member:

Westbrook, L. F., Reed, E. Airport sanitation. Public Health Rep. 75: 835-839, Sept. 1960.

BUREAU OF LOCAL HEALTH SERVICES

Director: (See staff changes below)

BUREAU ACTIVITIES

Primary responsibility for the organization and supervision of county health departments rests with this bureau. Its director acts as supervisor and consultant to the county health officers. The degree of local autonomy in each health department varies from county to county and is contingent upon the size of the community, the local staff, and the latter's training and experience.

The Bureau of Local Health Services is administered by the director and an assistant, and it consists of the Division of Nursing, Division of Sanitation, a Nutrition section (now a division) and 2 records consultants. The various disciplines represented within the bureau are responsible for the recruitment, orientation and training of their counterparts in the county health departments, and are available for consultation at the local level. The bureau as a whole serves as liaison between local health departments and the State Board of Health.

During 1960 the services of 77 full-time physicians were required to staff our local public health programs, of which 42 were directors and 35 were assistant health officers. Also, 10 part-time physicians served in various clinical activities, and 4 public health residents were employed. During the year 5 local directors resigned and 7 were employed, leaving 2 vacancies at the end of the year.

The same difficulties were encountered as in years past regarding efforts to recruit well-qualified public health personnel. It is hoped that the salary adjustments which have been proposed will be approved and that sufficient funds to implement these adjustments will be appropriated at the next session of the legislature.

STAFF CHANGES

Wade N. Stephens, M.D., served as director of the bureau until September 1, at which time he was appointed director of the Community Health Administration Study (Kellogg Grant). Wilfred N. Sisk, M.D., who was in charge of this program, was transferred to the Bureau of Local Health Services as director. Doctor Sisk served in this capacity until December 31 when he resigned to become director of the Orange County Health Department. At this time, C. M. Sharp, M.D., Assistant State Health Officer, was appointed acting director of the bureau. Hubert U. King, M.D., served as assistant director during the entire year. In July, Enrico A. Leopardi, M.D., was assigned by the U.S. Public Health Service to the bureau as resident in public health administration for 1 year.

TRAINING

Study of the orientation and training programs for health officers was continued during the year. It is expected that this study will continue during the coming year with the hope that improved orientation and other inservice training programs will result. A 3-day seminar jointly sponsored by the Health Officers' Association and the State Board of Health was held in Miami in December. Opportunities were provided for local health officers to attend various meetings and seminars at the central office, and a 5-day orientation program for new health officers was held at the State Board of Health in September.

During the year 4 health officers matriculated in schools of public health to take postgraduate work leading to the Master of Public Health degree. One local health officer became a diplomate of the American Board of Preventive Medicine.

Training programs for nurses and sanitarians are discussed in the reports of their respective divisions.

RECORDS CONSULTATION SERVICE

During the year the 2 records consultants, along with other bureau staff members, continued to work closely with the State Records Committee and the Records Committee of the Health Officers' Association in the review and revision of records. A large portion of the consultants' time was spent in implementing the change in medical and nursing records recommended by the above committees in 1959. In essence, the new system will centralize all medical and nursing records in a single family folder. The records consultants accompanied the nursing consultants to 17 counties to assist local staffs in adopting this new record system.

In addition to the above major activity, these consultants made numerous visits to the counties to assist local personnel with clerical problems. The consultants assisted in the orientation of 16 new clerical personnel.

COUNTY HEALTH DEPARTMENTS

In October, St. Johns County reorganized its local public health program to become affiliated with the State Board of Health. The staff consists of a director, 3 public health nurses, 2 sanitarians and 2 clerical personnel. All 67 counties in Florida now have public health programs under supervision of the State Board of Health. In October, the Collier-Lee Health Unit was reorganized into 2 separate single-county departments. In 1960 there were 42 county health units, which includes 26 single-county, 7 bi-county and 9 tri-county units.

STAFFING AND FINANCING

In December 1960 there were 1534 employees on the staffs of the county health departments. This number represents an increase of 162

persons (10.5 per cent) over 1959. County health department budgets totaled $8,555,818 for the year, or $1.80 per capita. Of this amount 72 per cent or $6,182,361 ($1.30 per capita) came from local contributions, and 28 per cent or $2,373,457 ($0.50 per capita) came from state and federal funds.

HEALTH DEPARTMENT HOUSING

1960 was a banner year for health center construction over the state. New health centers were completed in 9 counties: Columbia, Seminole, Brevard, Santa Rosa, Liberty, Jefferson, Levy, Hendry and Palm Beach. In addition, new auxiliary quarters were secured in Escambia, Duval, Pinellas, Lee and Brevard Counties. There are a total of 151 health centers throughout Florida. Sixty-seven of these are headquarters of which 60 are considered adequate. The remaining 84 are auxiliary centers, of which 72 are adequate. Thirty-seven of the health departments have their own separate headquarters buildings, while 44 of the auxiliary centers are separate structures.

TRENDS IN LOCAL PUBLIC HEALTH PRACTICE

A number of trends in county health department programs and administrative practice have become evident in the past few years. Perhaps the most recent of these is an increasing interest on the part of county health officers in their own training and in better communication between themselves. The December seminar in Miami is an example of this. Two issues of a Health Officers' Bulletin have been published, for which the local health officers supplied much of the material.

Research is gradually becoming recognized as an important aspect of good public health administration. A number of research projects and studies were underway in various counties during the year (see Research Coordination under Administration elsewhere in this Report).

Screening tests as casefinding tools are receiving more widespread use. Tuberculin screening tests were used in 65 counties. In 17 of these there were mass programs carried out on selected groups, which represents a 50 per cent increase over last year. The relatives of known diabetics were screened for diabetes in 13 counties, an 18 per cent increase over 1959. Following intensive publicity by the Bureau of Maternal and Child Health, a program of testing for phenylketonuria in infants was inaugurated in 22 counties. This activity, aimed at the early recognition of this metabolic defect, will aid in preventing severe mental retardation which ensues in untreated cases.

By the year's end 7 county health departments had bedside nursing programs, compared to 5 in 1959 (40 per cent increase). In view of the enthusiastic patient, physician and community support of this activity, extension to other counties is expected.

Nine dental preceptors were employed and there were 11 organized dental programs during the year. The white mobile dental unit of the

State Board of Health gave dental care in 12 additional counties and the colored unit in 6 counties.

The number of mental health workers assigned to counties increased during the year from 26 to 27. While mental health clinics showed no increase in number, more personnel were employed and services have increased in proportion.

Accident prevention and the chronic diseases are beginning to receive more attention at the local level. The demand for services in these fields grows constantly.

There is an increasing use of volunteer workers in county health departments. The Red Cross (School) Gray Ladies are now contributing their services in 7 counties, primarily in the school health program.

COUNTY HEALTH DEPARTMENT ACTIVITIES

The statistical report of county health department activities (Table 6) indicates the number and types of various programs conducted at the local level. Although all the health departments were active in the basic public health programs, some have reported noteworthy or unusual achievements which are abstracted in the following paragraphs.

GRASS ROOTS HIGHLIGHTS

HURRICANE DONNA

This disaster, the most costly in Florida's history, struck on September 9, 1960. Damage was widespread along the Keys, most severe in Islamorada and Marathon. The *Monroe County Health Department* was especially active working in concert with other official and voluntary health agencies. Nurses aided in medical care and immunizations. Typhoid immunizations were given to those affected by the breakage of the aqueduct which serves the Key West area. Together with engineering and sanitation consultants from the State Board of Health, the health department supervised the emergency sanitation program. An emergency portable bacteriological laboratory was established with the assistance of a bioanalyst from the Bureau of Laboratories.

Collier County was among the hardest hit. The health department staff worked night and day to protect water supplies and to give immunizations. Over 12,000 typhoid and 1200 tetanus immunizations were given immediately following the hurricane. Some 683 water samples were tested, of which 112 (16 per cent) were found to be unfit for consumption. With assistance from the State Board of Health, this CHD was able to do an excellent job of protecting its citizens following this disaster.

The *Broward County* mobile health unit, health director and public health nurses aided Everglades City in the tidal wave disaster following Donna. The public health nurses gave 15,000 typhoid injections to persons living in areas where septic tanks had overflowed.

The *Charlotte CHD* was also busily involved following this disaster. The results of testing water supplies showed there was gross water contamination in the county. By the use of millipore filter technique the health department staff tested its own water samples at a great saving of time and expense and will continue this as a part of the routine service of the health department.

RESEARCH FOR THE AGED

Pinellas County, with its high proportion of senior citizens, is an excellent place to study their health needs. A research program in the health department designed to develop more efficient service to the aged is now in its third year. Four surveys have been completed: a population survey of 2544 non-institutionalized residents over 65; two surveys of all patients visited by public health nurses and welfare workers; a survey of records and medical care in nursing homes. Based on the accumulated data, plans are being made for pilot programs to begin in 1961.

The Tampa Bay Council for research in gerontology was originally sponsored by the Pinellas CHD. This has brought together individuals interested in this research from the Pinellas and Hillsborough CHD, the University of South Florida, Mound Park Hospital Foundation and the Veterans Administration. This council, representing the best minds and facilities available in the area, should give continued stimulation to research in this field.

IMMUNIZATION ACTIVITIES

The Dade County Community Polio Program (immunization with live vaccine), which received national recognition, was sponsored by the University of Miami School of Medicine, Dade County Department of Public Health and Dade County Medical Association. Truly a community effort, the campaign was supported by many individuals and organizations. Without the wholehearted support of practicing physicians, public health workers, school teachers and communications media, the program would not have been possible. Without the assistance of pharmacists, automobile dealers, industries, churches and various voluntary health, fraternal and civic organizations, the task would have been exceedingly difficult. The effectiveness of the extensive professional, educational and publicity programs conducted by the county medical association is indicated by the fact that approximately 425,000 persons under 40 years of age received the live Cox-Lederle oral vaccine during a 13-week period. Although insufficient time has elapsed to accurately evaluate the degree of protection provided by this vaccine against paralytic polio, some presumptive evidence of its effectiveness is suggested by the following: From May 31 through December 31, 1960 *no cases* of paralytic poliomyelitis occurred in Dade County (population 920,000).

A communitywide immunization survey was conducted by the Hillsborough CHD. Immunization histories were obtained on all children in the elementary schools through the cooperative efforts of school and health department personnel. This survey showed that, though the immunization level is generally high in the county, areas in the low socioeconomic strata need concentrated attention.

Mass polio immunization clinics using Salk vaccine were conducted cooperatively for labor groups by the Hillsborough CHD, the County Medical Association, Red Cross and the AFL-CIO and CSA (labor unions).

The director and staff of St. Johns CHD are quite pleased with the outstanding cooperation given the school immunization program by the county medical society and school officials. The result of this activity is that an unusually high percentage of school children have completed their routine immunizations.

PUBLIC HEALTH NURSING

The Clay County Citizens Advisory Council, organized in 1958, has been working in full partnership with the Clay CHD. This organization, although intended to develop and promote the combination nursing service, has proven invaluable to the county's entire public health program. The nursing services' caseload has grown steadily and physicians are referring all types of cases. Volunteer services have been exceedingly valuable in maintaining a loan closet which was widely used. The combination nursing service has contributed greatly to close working relationships with the local physicians and the new hospital. Hospitalization time has been reduced through early discharge and a continuation of nursing care at home.

The Baker County Community Nursing Advisory Council has promoted better public relations and better public health for the county. Its loan closet may be used by anyone in the county and its transportation committee has been providing services for patients attending the various clinics in Jacksonville. The combined nursing program, well accepted by the community, appeals to the patients since the same nurse visits the home whatever the need may be.

In August 1960 the West Volusia County area, with headquarters at DeLand, was organized to bring this service of the Volusia CHD to a population of 30,000, bringing the total population covered by combination nursing service in the county to approximately 100,000.

As a consequence of the low cost maternity plan jointly sponsored by the Clay CHD, the county hospital's medical staff and hospital administration, the number of mid-wife deliveries are being reduced. Patients attending the health department clinics are delivered in the hospital. For this latter service they pay in advance a small weekly fee. If mother and baby are normal 24 hours postpartum they are discharged for home care. Copies of prenatal clinic records are sent to the hospital and orders

for home care are copies from hospital records for the public health nurse.

SANITATION

The Sarasota CHD distributed notices of its septic tank policies to better inform the public about health department recommendations regarding septic tank installations.

Volusia County's commissioners, through encouragement by the health department, appointed a citizens' committee to appraise the feasibility of a countywide sewerage program. Also, the health department's swimming pool program achieved high standards for the more than 100 public swimming pools in the county.

Every municipality in Pinellas County not having an adequate sewerage system is constructing or actively planning such a facility. Voters in the developed unincorporated communities have approved sanitary districts and 2 more such districts are being planned elsewhere.

A countywide zoning resolution was adopted by Martin County Commissioners becoming effective August 1960. Thus the entire county is under the Sanitary Code of the State of Florida which provides long range planning for the development of public water and sewage disposal systems. Also, a long needed sewerage expansion program for the City of Stuart is now under way. Stuart's modern sewage treatment plant, when expanded to include commercial and residential areas, will greatly decrease sanitary nuisances and river pollution.

A permanent Food Service Training School was organized by the Orange CHD. This is the second such school to be established in the state. The first was developed in Escambia County in 1958.

Five municipalities organized rodent control programs in cooporation with the Pinellas CHD.

Due to the leadership of the Putnam CHD the citizens of Palatka presented a united front against insanitary conditions existing in certain areas of the city and county. Home surveys in the blighted areas revealed that the main defects were insanitary privies, absence of modern sinks and running water, lack of garbage cans, and weeds and trash on the premises. An important factor in the success of the program was the publicity provided by the local newspaper. On many occasions reporters made joint inspections with sanitarians. Leading citizens, including PTA members, school principals, ministers, city and county officials and representatives from civic groups worked with health department representatives. "Block captains" were appointed to direct clean-up activities in their block. This idea has spread and meetings have resulted in other communities uniting to remedy their problems. The health department has already been instrumental in securing a number of corrections with the support of these community groups. Surveys for intestinal parasites of children in slum areas revealed that 25 per cent were infested with roundworm. As a result of this effort a Negro health committee has been

organized for general public health promotion. It consists of a central committee, zone commanders and block or area captains. It is hoped that this movement will improve living standards, promote better personal hygiene and in general improve healthful living for the Negro population.

TUBERCULOSIS CONTROL

Much work has been done in the tuberculosis program of the St. Johns CHD with routine chest x-rays being replaced by routine tuberculin testing of foodhandlers.

During the fall a tuberculin screening test program was conducted by the Pinellas CHD among some 2000 students at the county schools to evaluate the use of the Sternneedle technique as a mass screening procedure.

During the year special mass tuberculin surveys were conducted cooperatively by the Research Epidemiologist from the State Board of Health and the health departments in the following 6 counties: Martin, Okeechobee, Pasco, Orange, Lake and Dixie. These studies, which completed their second year, utilized simultaneous skin tests with both "Standard" and "Battey" strains of "purified protein derivative." They are supported by a grant from the National Institutes of Health for the study of the unclassified mycobacterial infections in Florida.

DENTAL HEALTH

During the year a dental survey in Santa Rosa County was completed with 5880 school children examined. Results showed that 13.2 per cent of the children had severe or very severe dental caries; 52.5 per cent had no "unfilled dental cavities." With the incorporation of dental facilities at the new health center it is hoped that a dentist can be added to the staff when funds are available.

A new child dental clinic was opened at the New Smyrna Beach center in October, thereby expanding the dental program to cover all areas of Volusia County.

One of the schools in a rural community in Baker County has developed a new approach for improving the problem of dental care for indigent children. Since an estimated one-third of the school children are unable to afford dental care, a plan was developed whereby the PTA paid one-half the cost of dental repair for such children and the parents paid the balance. In addition the local dentist provided his services at a reduced fee. This program was well received by parents and community. The program is being continued and another rural school is starting a similar program.

GLAUCOMA CLINIC

A Glaucoma Clinic inaugurated in 1960 is jointly sponsored by the Sarasota CHD and Sarasota Hi-Noon Lions Club. This clinic is conducted 1 evening weekly at the health center and is intended primarily

for persons over 40 years of age who have not had an examination for glaucoma during the past 2 years. Appointments for the clinics are made through a local telephone answering service and are limited to the first 50 phone calls made during any 1 week. The staff consists of local ophthalmologists who donate their services; volunteer nursing assistants provided by the county nurses' association; and volunteer clerical help by the Lions Club members and their wives. The nursing staff of the health department makes follow-up home visits.

INDIAN HEALTH

With the assistance and cooperation of the U. S. Public Health Service the Glades and Hendry County Health Departments have accepted responsibility for providing outpatient medical services, public health nursing care and general sanitation services for the Seminole Indians at Brighton and Big Cypress Indian Reservations. These services to the Indians supplement the medical care and hospitalization which is also provided by the federal government by contract with local physicians and hospitals.

RADIOLOGICAL HEALTH

Surveys of medical and dental facilities and radiological consultation were made in 7 counties during 1960. This enterprise was conducted cooperatively by a team from the State Board of Health's Division of Radiological and Occupational Health and the health departments of Hillsborough, Monroe, Broward, Palm Beach, Dade, Hendry and Highlands Counties.

IN MEMORIAM

Hillsborough County and public health in Florida suffered a great loss in the death of Dr. Frank Chappell, veteran public health officer, in November.

DIVISION OF PUBLIC HEALTH NURSING

RUTH E. METTINGER, R.N.
Director

This division has the responsibility to plan, promote, develop and administer statewide public health nursing services through the county health departments and to correlate and coordinate these services with the nursing aspects of the programs of other bureaus, divisions and agencies.

The division carries on its activities with a staff consisting of a director of nurses, 5 generalized public health nursing consultants, a nurse-midwife consultant, a secretary and a stenographer.

The consultants are assigned to geographic districts and spend approximately 75 per cent of their time in their districts assisting in and promoting the general public health nursing programs of the county health departments. In addition to the broad generalized public health nursing responsibilities, each consultant is assigned and has received training in a specific specialized public health nursing responsibility: nursing homes, staff education, inservice training, supervision of midwives, civil defense and safety. These specialized activities are carried out on a statewide basis.

One of the continuing areas of activity is in the field of recruitment. As of December 31, 1960, there were 656 public health nurses in Florida. There were 104 terminations of service in the county health departments representing a turnover rate of 19.8 per cent in this group. At the end of the year there were 19 public health nurse vacancies in the county health departments. Forty per cent of the public health nurses in the counties have received less than 1 year public health nursing preparation, emphasizing the constant need for training.

The inservice training program for nurses without previous academic preparation or experience in public health has been less active this year because of the employment of many graduates from the collegiate schools of nursing, who have been prepared for first-level public health nursing positions. (A total of 61 are currently employed.)

Promoting and assisting in the implementation of inservice education programs in some of the smaller counties have been given additional emphasis this year. Hesitation on the part of the staff nurses in small counties to assume leadership roles has meant that more direct participation in programs by the consultants has been indicated. However, an increasing responsibility is being assumed by the groups. Regular monthly inservice education programs are routine in most counties.

At the request of Peabody College, Tennessee, the division made arrangements for 5 students to receive the required 3-months' field experience in a county health department having a combination service. Seven county health departments provided clinical experience in public

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health nursing for basic nursing students from the following collegiate schools: University of Florida, University of Miami, Barry College, Florida State University and Florida A & M University. Southern Missionary College students, who receive their clinical experience at the Florida Sanitorium, receive public health experience at the Orange CHD, integrating their field work with clinic work in the Sanitorium.

Consultants made a total of 230 request visits to the county health departments, working with the nurses, enabling them to meet the ever increasing demands for improvement, change and inclusion of activities for which they have not been adequately prepared. New nurses are taught how to practice within a public health setting.

A few of the phases of public health nursing which have been given emphasis by the consultants through the past year are: organizing and teaching mother and baby care classes; care of patients from hospitals for the mentally ill; care of those with chronic diseases; use of new types of equipment designed to conserve nursing time and strengthen practice; techniques and activities enabling them to create situations whereby individuals and families may be motivated to assume responsibility for their own health needs.

The consultant responsible for the nursing home program continues to act as resource person. She assisted the nursing home division personnel in making necessary state-level inspections of nursing homes in the counties; assisted the nursing home division staff in planning and implementing programs of study on nursing homes; participated in planning for a workshop for nursing home administrators; and assisted in preparation of the nursing home manual. She also attended a national workshop in Washington and was a member of the committee reporting to the White House Conference on Aging.

The consultant with the specific responsibility of civil defense and safety programs prepares and assembles materials and visual aids for conducting classes and demonstrations in the nursing aspects of civil defense. At the request of nursing staffs in county units she plans and conducts the classes. She attended the 5-day course sponsored by the National Office of Civil Defense Mobilization held in Michigan.

The inservice education program conducted by 1 of the consultants consists of study groups held by the counties in various areas of the state. She prepares and assembles materials, recruits personnel for program participation and plans workshops in cooperation with other bureaus and divisions.

One consultant worked as key person on a committee (consisting of nursing supervisors of county units) in preparation of the manual of procedures and policies for organization of the combination service.

The nurse-midwife consultant holds educational classes for licensed midwives. In counties where recruits are to be trained for replacement of retired and deceased midwives, she supervises their training and works

closely with the local public health nurse. Two-thirds of the 228 licensed midwives were reached through educational meetings and individual home visits. In 1960 there were 10 less midwives licensed than in 1959. Eleven counties have discontinued the licensure of midwives.

Three consultants were assigned to areas affected by Hurricane Donna, assisting the local public health nurses.

Further emphasis was given to the organization of combination services. Factors leading to improved patient care are: 1 nurse visiting a family to meet all their needs; reduction of administrative costs in such a combination; the increased scope of the lay board's community program; and the greater service satisfaction for nursing personnel were discussed with many groups in the state. Seven combined services are now in operation.

Public health nursing in our changing society requires continuing self-evaluation and adaptation to change in programs at all levels. This requires a new learning or relearning, a change of attitude and/or a different pattern of practice. In order to understand as well as to meet the various demands for service and consultation, it is necessary to know more than the schedule for the day. To this end, nursing personnel of this division have attended short courses and made themselves acquainted with new community facilities and attended professional meetings and conferences with division directors and specialists in health and related fields.

Surveys and time studies were made in 3 counties to assist the public health nurses in evaluating and planning their work.

The institution of the new family record system was done cooperatively with the records consultants.

Cooperative programs with Gray Ladies, organized by the Red Cross, local boards of education and county health departments, now function in the schools. These programs are becoming increasingly popular. The volunteers enhance the school health program and free nurses for duties for which they are especially prepared.

During the summer of 1960, the public health nursing faculty of the University of Florida undertook a project which was designed to aid the nursing staff of Alachua County in their selection of maternity patients for intensive nursing care. Planning and designing the project was shared by county and college personnel. The analysis was done by the social anthropologist of the College of Nursing. Results gave some clues as to what guide lines may be used in selection of people who can benefit from public health nursing service.

DIVISION OF SANITATION

A. W. MORRISON, JR.
Director

The functions of this division were carried out by a staff consisting of: the director, 5 sanitation consultants and 2 clerical personnel.

Activities were focused toward the development and improvement of effective sanitation programs designed to serve local needs in all counties of the state. Major emphasis was directed toward providing high quality consultation services for the county health departments. Training and recruitment activities were pursued with vigor and specific program functions were in process of being brought up-to-date in all counties. Contacts were maintained with other state and federal agencies in all areas of mutual interest and responsibility throughout 1960.

A study on trailer parks was completed and a recommended revision of regulations was prepared. The regulations were adopted by the State Board of Health in June. Studies on food service and abattoir regulations were nearing completion at the end of December. Preliminary work on food processing was also initiated during the year. These and other projects concerning State Sanitary Code regulations will be continued during the coming year.

Seven sanitation forms were revised and 2 additional forms were added. The revised forms have been distributed to the county health departments for use in the pertinent programs. Considerable work in connection with the preparation of a manual of procedures for county health department sanitarians was done by the entire consultant staff. A draft of this manual will be submitted to the counties for review in early 1961.

In cooperation with the Bureau of Laboratories, a proposal for scientific studies in the field of "potentially hazardous foods" was explored. The necessary plan and procedure for such a study has been formulated and it is hoped that a research grant will be obtained to carry out this project during the coming year.

CONSULTANT SERVICE

Staff members made a total of 352 field visits to the county health departments in 1960. Assistance was provided to the health officers and sanitarians in all facets of environmental sanitation. Two county sanitation programs were evaluated during the year. One of the evaluations included a time study of specific sanitation activities. Both included a review of program records and coverage with an analysis of program effectiveness. Recommendations consistent with local requirements were submitted to the counties involved.

Emergency assistance to county health departments in connection with recurring flooded conditions in central and south Florida and the disaster created by Hurricane Donna in September, was provided by staff members. Two consultants were dispatched to Monroe County and 1 to the southwestern counties immediately following the hurricane. One spent a week in the upper Keys and the other remained in the Marathon area for a period of 3 weeks. These sanitarians, working with county health department and Civil Defense officials, examined food supplies; supervised removal and disposal of damaged foodstuffs; checked emergency water supplies, feeding facilities and waste disposal; and approved the re-opening of public food establishments when water and power became available. The third consultant transported medical supplies and served as a communication link with mainland counties which fell in the path of the hurricane. He also participated in various sanitation activities in these counties for several weeks following the storm.

SANITARIAN INSERVICE TRAINING

A total of 93 local health department sanitarians plus 4 foreign students, sponsored by federal grants, have completed the inservice training program during the past 5 years. Two courses were conducted the first year and 3 courses have been held in each of the subsequent years. The 12-week course consists of an 8-week period of classroom and laboratory instruction in Jacksonville with 4 weeks of internship in selected county health departments. Each of the staff consultants participates in the instructional phases of this program. Sixteen sanitarians from 12 counties completed the course in 1960. They were distributed as follows: Dade—2, Orange—2, Pinellas—3 and 1 each from Alachua, Duval, Gadsden, Hillsborough, Indian River, Marion, Martin, Okaloosa and Volusia.

FOODHANDLER TRAINING

Efforts were continued to broaden the coverage of foodhandler training opportunities through the presentation of courses for specific groups. Staff consultants worked with county health department sanitarians in designing, planning and presenting this type of program for school lunchroom personnel, institutional workers and other groups throughout the year. Fifteen counties, including 8 which recorded no activity during the previous year, presented foodhandler training programs.

Alachua, Baker, Bay, Brevard, Escambia, Gadsden, Hillsborough, Holmes, Jackson, Nassau, Okaloosa, Orange, Pinellas, Polk and Taylor Counties reported a total of 2723 foodhandlers certified in the standard 6-hour courses. Several hundred additional foodhandlers attended courses of shorter duration in 1960.

OTHER TRAINING

Staff members provided instructional assistance in a number of training programs during the year. Two consultants participated in school

custodian clinics held in 4 separate counties. One assisted a county sanitarian in conducting a series of safety programs. The director served as an instructor in the annual training course for local school board maintenance supervisors and participated in programs at the Poultry Institute and a bottled water seminar. Planning assistance was provided for sanitarian short courses at the state universities and several State Board of Health training programs.

One consultant attended a United States Public Health Service training course on environmental radiation surveillance and all staff members attended various short courses, seminars and other training programs.

RECRUITMENT

Recruitment activities were directed toward obtaining qualified personnel with sufficient science background to effectively fill sanitarian positions in the county health departments. A scarcity of new positions, due to severely limited budgets, resulted in few vacancies until the last quarter of the year. Several counties obtained additional local funds in October which enabled them to provide long needed staff increases.

Contacts with the colleges and universities were maintained and recruitment brochures were distributed. A slide series on the activities of sanitarians was presented at several group meetings. Approximately 100 interested persons were interviewed and several score inquired about sanitarian positions by telephone or mail during the year.

SPECIFIC SANITATION PROGRAMS

This division functions in a number of specific sanitation program areas. In 5 of the programs, the division is responsible for issuing a State Board of Health license or permit. Another program involves recommendations from the division for required federal certification. All of the field activities related to divisional program areas are carried out by the county health departments. Local sanitarians visit establishments and facilities to maintain proper compliance with sanitary practices and procedures. Performance of various field tests plus the collection of certain specimens for laboratory analysis coupled with the proper interpretation of test results constitutes an integral part of program activities. Staff consultants provide assistance to the counties in each of the sanitation program areas.

TRAILER PARKS

Considerable activity was again devoted to this growing program in all sections of the state. County health departments submitted several hundred recommendations covering new parks, expansion of existing parks, facilities not previously permitted and changes in ownership. The 466 new permits issued represents a net increase of 218 parks for the year.

A total of 2528 trailer parks providing in excess of 80,000 trailer spaces were operating under current State Board of Health permit at the close of 1960.

FOOD PROCESSING PLANTS

The number and variety of food processing plants continues to expand. County health departments are providing additional attention to the sanitation factors of these operations. An increase of 76 plants was recorded bringing the total to 358 food processing plants permitted in 1960.

CAMPS

Major emphasis was given to the improvement of migrant labor camp facilities throughout the year. The rapid expansion of activities in this program has resulted in the elimination of many insanitary conditions. A number of new living units have been constructed and hundreds of others have been repaired or remodeled to provide satisfactory housing for migrant workers. Upon the recommendation of county health departments, 167 migrant labor camps were licensed during the period of July 1-December 31, 1960.

An additional 21 recreational and educational camps were operating under current permit at the end of the year.

BOTTLED WATER PLANTS

This program covers plants in 18 counties and the out-of-state plants which ship bottled drinking water into Florida. Continuous sampling and laboratory analysis of these bottled waters is maintained to insure that consumers receive a high quality product. A total of 34 bottled water plants were permitted in 1960.

RENDERING PLANTS

Increased county health department activity in the sanitation of rendering operations was noted during the year. The number of approved plants remained static with 7 rendering plants operating under State Board of Health permit.

COMMON CARRIER CERTIFICATION

The transfer of responsibility for railroad and vessel watering point sanitation to the division in January resulted in considerable expansion of activities in this USPHS cooperative program. These common carrier facilities now include: 35 airline catering and watering points, 10 airline servicing areas, 4 railroad commissaries, 21 railroad watering points and 62 vessel watering points. County health departments conducted field activities and submitted reports to the division in this program. These

reports served as the basis of our semi-annual recommendations to USPHS for official Interstate Carrier Classification Lists.

FOOD ESTABLISHMENTS

All counties continued major food sanitation activity directed toward the prevention of food-borne diseases. Several counties prepared investigation kits containing necessary equipment and supplies to facilitate the proper handling of food-borne disease outbreaks. Increased emphasis was given to the proper handling, preparation and storage of potentially hazardous foods in all control programs. Local sanitarians made 149,799 visits to the 24,849 food establishments of all types under their jurisdiction.

SCHOOLS

Operational aspects of the school sanitation program were conducted by the county health departments. Escambia, Alachua, Hillsborough and Orange County Health Departments prepared and distributed bound copies of complete sanitation survey reports on the schools of their respective counties. Staff consultants participated in a comprehensive school health evaluation project at a Duval County high school and in a maintenance and operation survey of Marion County schools.

HOUSING

Several county health departments engaged in housing survey activity during the year. Projects were undertaken in Pinellas, Escambia and Putnam Counties while Leon and Hamilton Counties continued work previously begun. A number of additional counties have indicated strong interest in constructive housing programs. Two staff consultants spent a week observing county health department operated housing programs in Georgia to secure additional information in this growing field of interest.

OTHER PROGRAMS

All county health departments continued to function in a variety of additional sanitation programs: the control of private water supplies, private sewage disposal, garbage disposal and sanitary nuisances. Other programs relating to rabies control, child care centers, nursing homes, institutions and recreational areas were widely conducted throughout the state. Staff consultants provided assistance to the counties in all of these programs.

TABLE 5
PERMITTED ESTABLISHMENTS AND FACILITIES—1960

County	Trailer Parks	Food Processing Plants	Camps	Bottled Water Plants	Rendering Plants
Alachua	80			1	
Baker	2				
Bay	69				
Brevard	81	1			
Broward	106	21	8	1	
Calhoun	2				
Charlotte	13				
Clay	18		3		1
Collier	18	1	38		
Columbia	3				
Dade	95	75	38	4	2
Dixie	5				
Duval	169		1	1	
Escambia	151	1			
Flagler	3				
Gadsden	7				
Glades	2		5		
Gulf	4				
Hamilton	8				
Hardee	3				
Hendry	3		4		
Highlands	6				
Hillsborough	222	43	15	2	2
Indian River	14			1	
Jackson	5	3	1		1
Lake	39		3		
Lee	56	5		1	
Leon	49		1		
Levy	10				
Madison	1				
Manatee	77	21	7	2	
Marion	32		1		
Martin	27	4		1	
Monroe	60				
Nassau	7				
Okaloosa	42				
Okeechobee	2				
Orange	106	14	1	1	
Osceola	11			1	
Palm Beach	100	17	22	3	
Pasco	89		7	1	
Pinellas	264	52		4	
Polk	215	17	15	1	
Putnam	13	2	4		
St. Johns	10				
St. Lucie	24	11	4	1	
Santa Rosa	23				
Sarasota	72	41	1	2	
Seminole	12	1			1
Sumter	17		1		
Suwannee	3				
Taylor	5				
Volusia	69	28	8	2	
Walton	4				
Out-of-State				4	
Totals	2,528	358	188	34	7

NUTRITION SERVICES

MARY BRICE DEAVER, M.S.
Director

The purpose of Nutrition Services is to improve the nutritional status of the people of Florida, including all ages and socio-economic levels and to promote good nutrition throughout the state. Therefore, an attempt has been made to extend nutrition coverage insofar as possible within the limits of existing staff.

During 1960, there have been several changes in staff with 1 regional nutritionist returning from educational leave to resume her duties in September and 1 nutritionist resigning to leave the state in July—that position being filled in September. All positions were filled at the end of the year, making a total of 4 regional nutritionists, 1 nutritionist on the Migrant Project staff in Palm Beach County and the director. Volusia County has added a part-time nutritionist to the county staff and becomes the second county in the state having a nutritionist; Hillsborough County has had a full-time nutritionist since 1958.

During the year, 62 counties have been visited. This does not mean, however, that each of these counties has received equal service, nor does it give an indication of the nutrition program in the county. Actually, 8 counties received only 1 visit, an indication that planning may be underway for the future, but so far very little use of nutrition consultation has been made. Twenty-two counties received more than 5 visits and here is where the greater concentration of service was given. Following the plan started during the preceding year, the regional nutritionists have attempted to provide regularly scheduled consultation service to those counties desiring it. This has worked well in most instances and has resulted in giving more nutrition assistance in most of these counties. The community feels that the nutritionist is a part of the local staff when she returns to the county regularly and uses her services in a variety of ways. In some counties the health department prefers to use the nutritionist only on request, and while these requests are filled whenever possible, there are occasions when a conflict in dates arising from a prior commitment occurs.

Although good nutrition is basic to two main objectives of public health, the promotion of optimal health and the control of disease, the inclusion of nutrition in the over-all health program is still a goal to be accomplished in many instances.

In the scope of activities, they might be classified generally as: services to health departments; services to the community; services to institutions; services to other professional organizations such as education and welfare; and training.

SERVICES TO HEALTH DEPARTMENTS

Inservice education is always a most important part of nutrition consultation and during the year 91 group conferences and 47 individual ones were held for health department personnel. In addition to these sessions which were the primary responsibility of the nutritionist, 25 additional meetings were attended where the nutritionist participated but did not lead the discussion.

In maternal and child health, there were 71 group conferences and 240 individual ones; 19 classes were taught with a total attendance of 505. These included services to prenatals, well children, the mentally retarded and crippled children.

In chronic diseases, 20 group conferences and 531 individual conferences were held. Services included classes for diabetics and their families and for heart patients with 735 attending such classes. Advances in the knowledge and treatment of debilitating diseases and greater efforts toward the prevention of the conditions now associated with aging have led to increased requests in this area. This is also occupying considerably more time in many county health programs, especially where home care is given. Programs in rehabilitation have also included nutrition in the planning.

The nutritionist with the Migrant Project has worked with other members of the team in continuing the investigation of the nutritional status of the migrants as well as studying methods and techniques for working with them. The special study which was done on dietary patterns and food habits has been accepted for publication.

SERVICES TO THE COMMUNITY

Talks were given to PTA groups, civic clubs and other organizations on normal nutrition and food habits and customs. Group meetings were requested and held on the following topics: weight control, new foods on the market, low cost foods, popular food fads and food preparation.

SERVICES TO INSTITUTIONS

There have been numerous requests for dietary consultation to institutions. It was not possible, because of limited time and personnel, to provide any more service in this area than had been given in the previous year. A manual on food service for nursery schools was completed and made available. There were numerous requests for this manual throughout the state and also from other states. Dietary consultation to nursing homes has been given on a limited basis but it has not been possible to fill all requests.

SERVICES TO OTHER AGENCIES AND ORGANIZATIONS

In working with the schools, 43 group conferences and 115 individual conferences were held. An attendance of 4350 was present for 171

classes which were held for school personnel, including teachers, supervisors and other administrative personnel and school lunch personnel. Several requests have been received for assistance in planning for the inclusion of more nutrition education in classroom teaching where nutrition is one of the major health problems. This has involved working with school health coordinators and other faculty members and should prove valuable for other counties as well. Ten dietary surveys were conducted in schools, providing information on food habits to aid in planning for nutrition education programs.

Work is being done jointly with the Crippled Children's Commission in preparing diet instruction sheets which may be used in their clinics. Preliminary planning has been done for a dietary study with the Children's Commission. In cooperation with the State School Lunch Program, revisions were made in the nutrition course outlines for school lunch workshops. All of the nutritionists participated in school lunch workshops held in their districts.

In cooperation with the Florida Heart Association and local heart associations, classes have been planned and taught for heart patients and their families in regard to normal diet and modifications as indicated in certain heart conditions.

Consultation has been given to county and state welfare personnel in regard to food budgeting problems and special diet problems.

TRAINING

Field experience was offered for a graduate student from the University of Tennessee, another from the University of North Carolina and 1 undergraduate student from Florida State University. Classes have also been taught and consultation given to schools of nursing, to practical nursing programs and to health education courses.

It is obvious that the nutrition services offered are limited by the small number of nutritionists on the staff and the great amount of travel necessary for each consultant to cover 16 to 18 counties. In planning for additional staff, priority should be given to the need for a position for a dietary consultant for state and county institutions and small hospitals. This is an area of service that has hardly been touched and is urgently needed. Increased dietary consultation to nursing homes is also a need that is increasing rapidly as the number of nursing homes in the state increases. If the food service is to be brought up to and maintained at a desirable level in these homes, there is definite need for training of the food service supervisors and workers. Most of them have had no training and yet are expected to prepare good food, serve it attractively and keep food costs down.

TABLE 6

SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	Dade	DeSoto	Dixie	Duval	Duval Special Program
A. COMMUNICABLE DISEASE CONTROL																	
1. Admissions to Service	9	81	17	365	71	254	5	65	85	106	20	0	123	7	47	84	0
2. Field and Office Visits	21	105	28	554	102	338	7	96	85	117	29	0	662	25	104	145	0
3. Hookworm Treatment Given	191	107	72	112	40	59	161	78	129	53	24	1,323	10	61	119	13	0
TYPE OF IMMUNIZATION																	
4. Smallpox	1,789	248	708	411	1,228	2,859	273	1,071	99	119	253	647	10,418	258	129	1,428	0
5. Diphtheria	2,877	915	1,411	578	2,717	4,580	361	1,173	526	236	802	3,247	10,417	1,081	436	3,710	0
6. Whooping Cough	2,062	715	1,411	390	1,408	2,186	353	1,144	272	170	407	3,247	10,268	364	329	2,292	0
7. Tetanus	4,301	2,057	2,666	792	3,088	5,234	948	1,638	971	311	1,326	3,984	14,158	1,094	458	5,113	0
8. Poliomyelitis	7,404	1,733	1,294	1,567	12,098	5,870	962	2,363	1,514	1,145	1,145	3,866	276,380	1,486	665	8,589	0
9. Typhoid	1,795	1,137	5,717	187	950	5,483	873	497	1,429	543	2,722	2,193	6,767	2,942	401	717	0
10. Rabies—Human	0	0	0	0	15	0	0	0	4	4	0	0	1	1	0	5	0
11. Rabies—Animals	0	71	0	65	0	0	0	0	0	0	0	0	0	0	0	0	0
B. VENEREAL DISEASE CONTROL																	
1. Admissions to Service	208	0	221	69	35	506	7	3	1	33	90	83	8,962	4	3	10,240	0
2. Not Infected	7	0	121	19	6	133	1	2	0	15	9	0	5,812	1	1	7,924	0
3. Treated in Clinic	145	0	100	45	1	320	5	1	1	11	20	44	2,086	0	2	2,317	0
4. Treated by Private Physician	0	0	0	0	11	55	0	0	0	0	7	0	0	2	0	14	0
5. Returned to Treatment in this Clinic	49	0	0	2	2	47	0	0	0	1	0	0	363	0	0	42	0
6. Epidemiological Treatment of Contacts	2	0	0	0	2	8	0	0	0	4	11	39	708	0	0	894	0
7. Dropped or Transferred	2	0	0	3	0	6	0	0	0	1	3	0	0	0	0	16	0
8. Patients Interviewed	32	0	43	69	25	145	1	4	0	2	22	83	1,366	3	4	1,159	0
9. Contacts Obtained	20	0	67	57	8	182	1	1	1	12	23	29	2,972	2	4	2,025	0
10-11. Field & Office Visits	261	0	344	131	89	3,414	16	5	1	13	223	147	38,974	6	10	22,433	0
C. TUBERCULOSIS CONTROL																	
1. Admission to Service—Case Active	38	6	14	10	87	154	7	5	5	12	17	13	240	4	0	156	0
2. Admission to Service—Case Inactive	75	3	69	43	92	280	13	7	7	21	31	20	1,310	8	6	732	0
2. Admission to Service—Contacts & Suspects	218	22	82	131	262	801	30	42	26	98	217	48	4,186	20	20	281	0
3. Admission to Service—Contacts & Suspects																	

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson
A. COMMUNICABLE DISEASE CONTROL																	
1. Admissions to Service	40	1	0	28	22	8	1	0	143	0	0	65	1,714	31	6	423	52
2. Field and Office Visits	104	1	0	38	22	9	4	0	191	0	0	93	2,368	45	10	517	84
3. Hookworm Treatment Given	244	3	128	70	213	32	561	321	131	44	86	22	245	916	115	304	95
TYPE OF IMMUNIZATION																	
4. Smallpox	4,748	100	291	2,952	112	22	422	338	383	62	264	128	5,537	477	251	1,802	570
5. Diphtheria	8,444	266	275	3,970	129	164	1,107	459	1,173	497	370	595	10,784	947	684	2,782	719
6. Whooping Cough	5,226	145	279	961	98	66	925	459	506	254	236	310	6,639	429	344	1,291	397
7. Tetanus	13,173	318	676	5,991	172	169	1,662	763	1,414	514	616	606	4,197	1,261	947	5,176	963
8. Poliomyelitis	18,319	594	1,396	8,856	265	287	1,942	1,030	2,154	807	1,881	1,511	20,946	1,763	1,700	5,807	890
9. Typhoid	5,171	24	688	3,647	40	9	1,451	311	1,912	28	249	26	790	452	761	3,319	203
10. Rabies—Human	0	0	0	1	0	0	0	0	0	0	0	0	10	0	0	1	0
11. Rabies—Animals	0	0	0	0	0	69	120	211	0	85	0	0	29,017	0	0	0	481
B. VENEREAL DISEASE CONTROL																	
1. Admissions to Service	2,289	23	7	121	5	19	7	20	8	8	6	47	3,972	5	48	53	23
2. Not Infected	916	5	0	10	0	8	0	0	1	7	1	6	793	1	0	4	3
3. Treated in Clinic	1,358	9	3	83	4	7	5	15	0	1	5	20	1,618	1	33	40	10
4. Treated by Private Physician	0	0	2	7	0	1	1	0	5	0	0	3	11	0	3	2	0
5. Returned to Treatment in this Clinic	8	6	0	0	1	0	0	6	2	0	0	14	7	0	1	3	0
6. Epidemiological Treatment of Contacts	0	0	2	21	0	0	0	0	0	0	0	4	244	0	13	7	4
7. Dropped or Transferred	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	2
8. Patients Interviewed	544	13	6	10	1	8	0	7	6	1	0	35	865	5	33	42	12
9. Contacts Obtained	958	9	2	26	2	9	0	7	4	0	0	20	1,404	2	24	37	6
10-11. Field & Office Visits	3,942	59	19	314	39	29	43	25	17	14	6	91	13,137	15	63	74	45
C. TUBERCULOSIS CONTROL																	
1. Admission to Service—Case Active	156	1	6	20	2	0	5	4	5	4	4	6	303	4	7	19	2
2. Admission to Service—Case Inactive	257	8	8	33	0	3	17	6	8	14	7	36	1,029	10	21	57	15
3. Admission to Service—Contacts & Suspects	644	44	35	279	5	11	56	39	9	44	27	59	4,372	69	29	90	43

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Lafayette	Lake	Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco
A. COMMUNICABLE DISEASE CONTROL																		
1. Admissions to Service	17	33	148	175	51	0	0	40	131	7	137	40	207	1	265	2	78	39
2. Field and Office Visits	17	141	258	190	51	0	0	65	251	9	168	55	245	1	769	12	137	107
3. Hookworm Treatment Given	27	94	102	143	56	172	114	13	281	7	0	124	372	19	134	91	16	303
TYPE OF IMMUNIZATION																		
4. Smallpox	55	143	1,655	2,181	212	157	712	279	939	785	1,086	1,298	1,520	108	3,244	178	4,305	370
5. Diphtheria	111	746	1,943	1,656	528	317	897	798	1,250	963	1,064	1,546	3,060	331	5,829	850	7,609	1,831
6. Whooping Cough	72	403	835	1,543	208	259	493	392	813	460	350	576	1,968	124	3,319	637	3,278	461
7. Tetanus	212	844	3,948	3,678	688	548	1,559	1,014	2,304	1,307	1,962	2,581	4,204	342	8,677	850	9,655	1,840
8. Poliomyelitis	364	1,273	4,052	5,879	1,403	932	2,136	1,328	3,325	1,693	1,290	2,422	6,255	561	14,363	1,368	14,581	2,555
9. Typhoid	87	160	1,838	2,452	494	253	1,940	75	2,536	908	4,339	3,060	2,859	182	6,441	500	1,415	241
10. Rabies—Human	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Rabies—Animals	0	0	0	0	0	0	259	2,469	0	1	0	62	0	0	0	0	0	0
B. VENEREAL DISEASE CONTROL																		
1. Admission to Service	1	19	100	1,048	19	2	24	532	529	51	105	12	72	35	523	65	964	17
2. Not Infected	0	2	20	130	1	0	9	202	126	14	14	5	2	0	30	0	236	13
3. Treated in Clinic	1	0	45	660	5	2	13	197	308	22	52	2	58	20	392	54	559	4
4. Treated by Private Physician	0	9	0	16	0	0	0	21	8	3	9	0	2	0	3	2	11	0
5. Returned to Treatment in this Clinic	0	0	6	77	5	0	0	52	10	2	1	3	14	0	51	0	45	0
6. Epidemiological Treatment of Contacts	0	0	21	155	7	0	7	47	78	5	30	0	15	11	89	12	102	1
7. Dropped or Transferred	0	0	0	0	0	0	0	25	4	3	0	0	2	0	0	0	1	1
8. Patients Interviewed	0	1	64	239	4	0	19	162	170	25	37	11	61	19	165	50	398	5
9. Contacts Obtained	0	2	59	426	4	0	7	344	233	11	33	1	43	19	596	132	516	3
10-11. Field & Office Visits	3	28	118	1,925	25	2	57	1,069	1,424	61	339	62	89	60	2,898	252	2,560	27
C. TUBERCULOSIS CONTROL																		
1. Admission to Service—Case Active	6	40	27	55	6	1	3	31	28	9	9	4	11	7	64	15	165	17
2. Admission to Service—Case Inactive	3	126	64	36	14	2	28	39	89	14	42	47	10	17	114	23	330	30
3. Adm. to Service—Contacts & Suspects	7	296	127	147	81	7	88	51	72	28	113	71	52	23	327	21	333	62

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Santa Rosa	Sarasota	Seminole	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington	Total for 1960
A. COMMUNICABLE DISEASE CONTROL																	
1. Admissions to Service	269	366	35	13	3	6	93	175	25	2	2	4	75	1	1	0	6,264
2. Field and Office Visits	420	542	59	14	5	7	99	292	25	2	2	4	169	2	1	0	10,053
3. Hookworm Treatment Given	87	250	25	0	8	162	16	137	79	89	47	155	55	249	1,138	380	11,027
TYPE OF IMMUNIZATION																	
4. Smallpox	1,685	3,613	719	304	72	558	578	441	474	269	329	117	458	66	473	181	69,911
5. Diphtheria	4,995	8,213	1,466	1,111	226	1,085	1,322	1,397	1,082	807	812	285	462	352	1,390	1,650	126,416
6. Whooping Cough	4,108	5,038	410	14	149	800	1,034	1,124	564	530	420	115	437	346	671	729	78,263
7. Tetanus	5,418	10,160	1,891	805	609	1,837	1,417	2,179	1,104	1,259	1,581	332	487	923	1,666	2,061	176,694
8. Poliomyelitis	7,849	15,770	2,001	290	689	2,885	2,168	3,655	2,263	1,901	1,408	578	1,645	850	1,467	2,085	510,901
9. Typhoid	362	692	34	358	69	1,023	60	1,953	392	484	331	221	31	699	1,402	247	91,033
10. Rabies—Human	0	4	0	0	0	0	0	109	0	0	0	3	0	0	0	0	150
11. Rabies—Animals	32	0	0	0	0	0	0	1	0	0	383	0	0	0	0	0	33,810
B. VENEREAL DISEASE CONTROL																	
1. Admissions to Service	829	510	178	57	67	12	269	153	35	16	31	8	111	8	7	20	33,550
2. Not Infected	104	123	66	17	4	3	137	2	1	4	10	0	13	4	0	0	17,098
3. Treated in Clinic	352	272	78	18	64	4	130	63	24	10	20	8	59	2	6	19	11,833
4. Treated by Private Physician	107	6	5	2	0	0	2	0	0	1	1	0	6	2	0	1	341
5. Returned to Treatment in this Clinic	21	36	27	5	0	0	1	11	6	0	0	0	17	0	0	0	944
6. Epidemiological Treatment of Contacts	61	35	5	18	1	0	0	17	4	1	6	0	10	0	1	0	2,710
7. Dropped or Transferred	0	227	0	4	0	5	0	2	0	0	0	0	2	0	0	0	320
8. Patients Interviewed	226	114	84	27	63	4	209	29	34	4	22	7	87	2	5	20	6,924
9. Contacts Obtained	250	158	88	16	10	1	261	45	14	2	20	7	45	2	2	8	11,272
10-11. Field & Office Visits	2,872	1,143	337	93	128	20	622	392	66	26	44	23	385	9	14	30	96,251
C. TUBERCULOSIS CONTROL																	
1. Admission to Service—Case Active	111	71	9	2	20	13	22	36	5	8	10	0	57	5	2	16	2,151
2. Admission to Service—Case Inactive	452	388	57	9	63	24	59	70	14	26	23	3	231	5	36	36	6,770
3. Admission to Service—Contacts & Suspects	709	658	60	32	59	84	68	208	39	59	29	1	386	52	109	97	16,895

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	Dade	DeSoto	Dixie	Duval	Duval Special Program
Tuberculosis Control Cont'd.																	
4. No. of Person X-rayed—Minature Films	10,220	0	0	2,242	0	30,505	1,452	0	0	3,213	3,954	0	23,206	0	0	0	0
5. No. of Persons X-rayed—Large Film	863	28	488	210	2,959	1,154	72	614	32	163	290	63	6,501	378	55	2,531	0
6. Tuberculin Test	312	5	122	117	207	6,993	37	841	19	53	1,905	33	1,414	13	57	165	0
7. Field Visits	742	43	166	416	483	3,593	42	217	29	262	338	115	4,423	59	91	897	0
8. Office Visits	241	18	185	107	731	940	71	82	49	153	549	70	19,523	111	132	2,336	0
9. Cases Hospitalized	29	6	16	6	23	78	5	0	3	7	13	13	429	4	0	25	0
D. MATERNITY SERVICE																	
1-2. Patients Admitted to Maternity Medical Service	139	22	103	95	146	290	9	1	3	86	111	3	2,780	0	24	1	0
3. Visits by Antepartum Cases to Medical Conferences	359	21	104	209	295	675	9	1	3	210	446	3	9,071	0	59	2	0
4. Patients given Postpartum Medical Examinations	34	1	0	5	46	82	0	0	0	8	25	0	895	0	1	7	0
5. Patients Admitted to Maternity Nursing Service	923	58	118	126	262	461	34	5	19	144	151	154	3,229	0	56	274	0
6. Field Nursing Visits	1,443	87	159	429	626	1,066	34	10	19	385	167	226	10,519	0	53	347	0
7. Office Nursing Visits	1,149	9	119	73	763	821	58	0	4	266	1,035	347	8,988	0	179	165	0
8. Number of Midwife Meetings	1	1	0	0	27	12	4	0	0	0	0	12	9	0	0	0	0
9. Visits for Midwife Supervision	27	8	18	27	79	83	3	0	0	8	33	56	69	0	35	0	0
10. No. of Midwife Deliveries Superivised by Health Dept. Personnel	0	0	0	0	2	1	1	0	0	0	0	0	0	0	3	0	0
11. No. of Individuals Enrolled in Classes for Expectant Mothers	169	10	0	0	0	0	0	0	0	0	0	0	1,153	0	0	16	0
E. CHILD HEALTH SERVICES																	
1-2-a. Adm. to Well Child Medical Service—Infants	325	4	57	56	78	459	0	0	0	40	39	36	4,414	0	3	273	0
1-2-b. Adm. to Well Child Medical Service—1-4	90	3	12	116	51	18	0	0	0	40	25	25	5,651	0	2	152	0
1-2-c. Adm. to Well Child Medical Service—5 over	65	5	3	105	67	11	1	49	0	63	23	35	2,530	0	8	108	0
3. Visits to Well Child Medical Conference:—																	
Infants	409	7	178	122	81	795	0	0	0	45	55	36	10,157	0	3	527	0
1-4	120	5	17	209	52	82	0	0	0	53	40	25	11,067	0	2	259	0
5-over	88	8	6	188	84	148	5	49	0	83	38	35	4,104	0	8	127	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson
Tuberculosis Control Cont'd.																	
4. No. of Persons X-rayed—Minature Films	9,139	0	0	9,634	0	0	0	6	0	831	0	0	71,532	1,858	3,886	0	1
5. No. of Persons X-rayed—Large Films	1,443	163	211	129	7	69	392	34	373	267	29	239	1,340	63	256	340	49
6. Tuberculin Test	523	338	13	1,086	2	22	33	42	5	172	16	98	9,499	202	34	71	33
7. Field Visits	3,672	58	35	1,049	11	15	74	11	34	117	68	112	4,793	77	121	203	106
8. Office Visits	424	340	66	243	1	32	90	82	41	87	38	128	5,545	127	34	325	38
9. Cases Hospitalized	74	0	6	20	0	0	6	4	2	2	3	5	159	1	8	15	1
D. MATERNITY SERVICE																	
1-2. Patients Admitted to Maternity Medical Service	766	60	12	495	4	13	23	0	11	66	12	16	2,316	13	0	196	43
3. Visits by Antepartum Cases to Medical Conferences	1,359	205	16	1,213	6	27	33	0	27	165	15	26	8,593	27	0	242	90
4. Patients given Postpartum Medical Examinations	203	22	1	272	0	1	17	0	2	0	0	0	1,006	5	0	74	13
5. Patients Admitted to Maternity Nursing Service	850	80	13	873	30	21	32	134	39	30	10	8	2,934	25	85	442	122
6. Field Nursing Visits	2,088	114	5	1,057	46	21	56	365	49	22	11	12	5,244	33	173	746	338
7. Office Nursing Visits	2,078	264	20	1,534	24	19	60	248	57	49	12	0	10,783	60	92	1,045	154
8. Number of Midwife Meetings	2	2	0	9	1	0	0	2	0	0	0	0	0	0	0	6	0
9. Visits for Midwife Supervision	22	0	0	191	0	0	6	2	1	0	7	4	8	8	4	133	10
10. No. of Midwife Deliveries Supervised by Health Dept. Personnel	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0
11. No. of Individuals Enrolled in Classes for Expectant Mothers	139	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0
E. CHILD HEALTH SERVICES																	
1-2-a. Admission to Well Child Medical Service—Infants	357	39	0	318	0	5	1	0	6	21	0	9	2,951	14	0	58	41
1-2-b. Admission to Well Child Medical Service—1-4	72	9	0	276	0	1	1	0	0	17	0	9	4,231	30	0	24	11
1-2-c. Admission to Well Child Medical Service—5-over	13	28	0	79	0	50	0	0	0	21	0	1	3,780	5	0	15	3
3. Visits to Well Child Medical Conference: Infants	976	69	0	344	0	7	1	0	6	41	0	10	5,594	17	0	68	47
1-4	204	22	0	293	0	1	1	0	0	30	0	9	7,170	35	0	25	11
5-over	16	51	0	84	0	50	0	0	0	34	0	1	5,198	5	0	21	4

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Lafayette	Lake	Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco
Tuberculosis Control Cont'd.																		
4. No. of Persons X-rayed—Miniature Films	0	12,505	13,755	12,508	7	555	2,370	11,402	0	494	0	0	0	712	20,586	2,067	40,600	386
5. No. of Persons X-rayed—Large Films	6	527	664	740	96	9	64	617	683	183	1,354	165	1,326	87	834	116	1,548	246
6. Tuberculin Test	0	3,200	2,253	1,801	66	3	51	217	1,118	860	165	88	1,287	406	649	14	8,332	417
7. Field Visits	21	903	257	707	251	12	88	169	520	124	389	330	378	116	1,516	86	1,902	120
8. Office Visits	15	354	338	266	72	9	171	196	73	40	203	150	231	61	1,225	125	816	268
9. Cases Hospitalized	0	31	24	42	3	0	1	31	15	4	5	9	4	2	57	5	114	5
D. MATERNITY SERVICE																		
1-2. Patients Admitted to Maternity Medical Service	1	110	198	219	82	9	60	111	0	0	61	2	18	0	769	103	495	23
3. Visits by Antepartum Cases to Medical Conferences	2	238	241	716	220	16	122	366	0	0	158	1	14	0	2,851	382	1,600	30
4. Patients given Postpartum Medical Examinations	1	33	74	48	10	19	10	68	0	0	12	1	9	0	312	35	123	3
5. Patients Admitted to Maternity Nursing Service	21	246	382	304	97	10	145	130	104	7	148	41	101	0	881	123	806	53
6. Field Nursing Visits	26	396	435	1,220	26	10	293	183	274	7	220	69	159	0	1,129	229	1,801	71
7. Office Nursing Visits	44	307	872	2	246	23	193	443	4	7	251	22	113	0	3,070	456	1,386	106
8. Number of Midwife Meetings	0	0	6	12	0	0	3	1	9	0	8	3	0	0	38	1	6	4
9. Visits for Midwife Supervision	6	20	1	41	13	0	20	2	28	0	2	37	11	0	4	12	11	6
10. No. of Midwife Deliveries Supervised by Health Dept. Personnel	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
11. No. of Individuals Enrolled in Classes for Expectant Mothers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0
E. CHILD HEALTH SERVICES																		
1-2-a. Admission to Well Child Medical Service—Infants	0	20	86	103	26	6	14	154	0	1	16	3	9	0	147	78	240	5
1-2-b. Admission to Well Child Medical Service—1-4	0	4	3	121	11	10	7	260	0	9	7	4	2	0	37	52	39	9
1-2-c. Admission to Well Child Medical Service—5-over	0	0	4	7	4	7	12	231	0	0	0	4	0	0	125	0	32	0
3. Visits to Well Child Medical Conference:—Infants	0	20	92	115	29	6	16	182	0	1	16	3	10	0	247	143	679	5
1-4	0	4	8	124	12	10	7	321	0	9	7	4	2	0	55	109	53	11
5-over	0	0	4	12	4	7	13	280	0	0	0	6	0	0	153	0	39	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Santa Rosa	Sarasota	Seminole	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington	Total for 1960
Tuberculosis Control Cont'd.																	
4. No. of Person X-rayed—Miniature Films	27,776	27,564	0	33	0	3,911	15,699	0	0	0	2,498	687	24,530	0	2,387	0	394,711
5. No. of Person X-rayed—Large Films	4,078	1,900	1,302	4	201	136	697	270	143	217	37	17	6,126	38	197	52	46,485
6. Tuberculin Test	3,250	7,130	1,541	215	46	121	91	54	48	54	75	0	769	25	567	91	59,486
7. Field Visits	1,913	2,564	163	17	336	381	715	502	96	85	34	8	1,621	98	39	61	38,994
8. Office Visits	8,084	2,905	96	47	372	140	560	512	110	141	67	43	663	29	266	212	51,799
9. Cases Hospitalized	85	56	6	3	16	5	15	15	3	3	9	0	34	5	1	15	1,586
D. MATERNITY SERVICE																	
1-2. Patients Admitted to Maternity Medical Service	674	1,161	234	0	254	1	99	122	21	6	47	61	246	29	10	31	13,116
3. Visits by Antepartum Cases to Medical Conferences	3,100	3,297	628	0	927	1	325	323	26	6	73	129	924	95	11	33	40,366
4. Patients given Postpartum Medical Examinations	433	157	61	0	0	2	46	30	0	0	13	2	142	11	1	22	4,398
5. Patients Admitted to Maternity Nursing Service	803	1,564	303	7	316	2	102	397	103	25	50	80	433	37	26	111	19,700
6. Field Nursing Visits	1,434	3,337	287	6	405	4	342	677	101	38	19	68	944	135	24	124	40,443
7. Office Nursing Visits	3,899	6,116	738	3	1,142	2	374	557	107	55	156	135	1,224	36	62	134	52,760
8. Number of Midewife Meetings	1	10	6	0	0	0	0	7	2	0	10	0	2	3	0	3	223
9. Visits for Midewife Supervision	31	29	21	1	1	0	0	87	43	4	8	0	51	19	11	5	1,367
10. No. of Midewife Deliveries Supervised by Health Dept. Personnel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
11. No. of Individuals Enrolled in Classes for Expectant Mothers	0	16	0	0	0	0	80	0	0	0	4	0	0	0	0	0	1,652
E. CHILD HEALTH SERVICES																	
1-2-a. Admission to Well Child Medical Service—Infants	771	700	112	2	77	4	0	34	0	4	29	59	335	13	1	14	12,667
1-2-b. Admission to Well Child Medical Service—1-4	931	105	16	0	0	1	0	6	0	1	0	68	425	3	1	16	13,014
1-2-c. Admission to Well Child Medical Service—5-over	528	151	19	5	0	0	0	2	0	1	6	65	351	1	1	10	8,634
3. Visits to Well Child Medical Conference:																	
Infants	1,518	1,191	123	2	145	4	0	35	0	5	38	89	695	13	1	18	25,036
1-4	1,370	139	20	0	0	1	0	6	0	1	0	122	849	3	1	21	23,001
5-over	683	211	19	5	0	0	0	2	0	1	8	156	576	1	1	14	12,600

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	Dade	DeSoto	Dixie	Duval	Duval Special Program
Child Health Services Cont'd.																	
5. Admission to Nursing Service																	
Infants	674	98	108	168	376	1,198	19	331	27	155	111	226	4,088	18	60	713	0
1-4	637	293	148	530	603	398	29	31	46	293	173	286	5,096	26	82	509	0
5-over	1,005	271	285	334	727	445	29	1,536	37	1,137	191	184	7,760	184	205	759	0
6. Field Nursing Visits—Infants	1,391	149	445	562	854	1,926	41	121	39	468	124	166	9,979	12	79	777	0
1-4	1,395	472	382	1,706	1,402	825	48	86	79	640	114	243	11,680	5	97	510	0
5-over	1,494	466	544	744	1,518	732	55	1,024	46	653	182	137	8,342	52	222	742	0
7. Office Nursing Visits—Infants	796	32	203	34	175	514	6	286	10	75	210	139	7,868	16	30	1,059	0
1-4	753	66	17	48	257	70	14	113	2	100	309	122	8,929	27	39	618	0
5-over	1,000	116	469	172	486	516	15	2,086	9	1,274	239	111	67,745	187	49	564	0
F. SCHOOL HEALTH																	
1. Pupils Examined by Physician with Parent Present	73	34	3	308	31	1,575	2	331	118	157	14	83	3,055	0	126	86	0
(b) Referred for Further Diagnosis	30	21	2	75	1	219	0	0	8	19	12	9	0	0	23	0	0
(c) Completed Referrals	20	7	0	58	2	7	0	0	0	0	12	6	0	0	1	0	0
2. Pupils Examined by Physician with parent not present	212	128	5	185	32	3,031	0	5	912	5	10	20	14,965	8	235	5	0
(b) Referred for Further Diagnosis	5	24	0	50	1	1,035	0	0	47	1	1	7	0	0	44	279	0
(c) Completed Referrals	2	9	0	34	0	1	0	0	4	1	2	7	0	0	0	13	0
3. Screening by other health department personnel—Visual	4,538	285	9,830	98	6,179	764	68	2,230	12	2,692	844	149	65,157	1,361	918	3,181	0
(b) Referred for Further Diagnosis	552	95	664	22	98	326	9	110	2	258	167	19	6,693	206	92	1,297	0
(c) Completed Referrals	89	3	36	26	6	6	10	87	5	89	15	17	1,635	25	0	298	0
4. Screening by other health department Personnel—Audiometer Testing	4,814	1	541	0	0	42	0	1,977	1	1	169	0	42,001	47	20	110	0
(b) Referred for Further Diagnosis	225	0	63	0	0	28	0	16	1	1	31	0	1,117	5	0	290	0
(c) Completed Referrals	99	0	0	0	0	0	0	11	1	1	2	0	502	0	0	6	0
7. Nurse-Teacher Conference	2,409	112	1,289	462	758	473	114	774	193	502	684	0	26,148	266	232	3,198	0
G. DENTAL HEALTH																	
1. Number of Dental Inspections	5,017	298	0	0	0	2,620	0	257	373	53	219	0	0	49	28	28,628	0
2. Number Requiring Treatment	3,115	237	0	0	0	1,613	0	257	336	30	219	0	0	1	28	18,595	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Lafayette	Lake	Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco
Child Health Services Cont'd.																		
5. Admissions to Nursing Service—																		
Infants	61	274	383	440	43	4	137	325	132	18	166	25	97	0	941	120	903	49
1-4	124	427	506	673	28	15	166	737	106	79	331	68	107	2	1,316	138	346	92
5-over	85	551	802	1,287	105	14	355	1,764	534	80	520	212	329	84	2,723	139	3,532	910
6. Field Nursing Visits—Infants	102	416	455	1,442	18	9	319	185	343	24	305	54	266	0	1,127	104	2,604	74
1-4	224	560	569	2,246	29	15	244	228	254	119	633	93	237	2	1,291	158	1,007	98
5-over	210	742	737	3,065	105	16	352	416	812	167	449	261	735	46	1,865	148	3,908	143
7. Office Nursing Visits—Infants	42	117	161	1	35	15	19	461	7	2	171	24	103	0	2,578	187	624	29
1-4	93	154	152	1	17	11	14	1,692	1	4	450	29	111	0	3,385	159	259	83
5-over	108	233	552	2	69	8	163	2,493	391	8	1,004	339	232	77	7,922	257	6,755	1,240
F. SCHOOL HEALTH																		
1. Pupils Examined by Physician with parent present	43	899	0	509	147	56	23	187	0	83	92	4	544	44	6	82	31	38
(b) Referred for Further Diagnosis	2	179	0	0	19	0	2	1	0	0	41	0	16	18	0	4	20	1
(c) Completed Referrals	0	29	0	0	0	0	0	0	0	0	2	0	6	1	0	2	19	1
2. Pupils Examined by Physician with parent not present	45	205	83	0	736	23	244	56	1,095	38	245	21	377	3	5	182	97	1
(b) Referred for Further Diagnosis	4	28	0	0	76	1	9	1	0	0	31	0	1	1	78	0	4	1
(c) Completed Referrals	0	5	2	0	1	1	1	0	0	0	1	0	1	0	2	0	16	0
3. Screening by other health dept. Personnel—Visual	7	2,360	1,489	5,973	1,268	107	110	2,270	1,093	2,808	2,660	198	3,486	736	23,897	126	21,219	1,216
(b) Referred for Further Diagnosis	7	309	166	976	114	0	25	333	154	291	157	20	304	4	2,751	22	3,476	38
(c) Completed Referrals	4	152	55	300	23	0	2	55	42	39	186	14	35	6	1,056	6	1,057	15
4. Screening by other health dept. Personnel—Audiometer testing	0	583	109	4,697	522	33	40	76	445	321	3,041	431	401	195	1,035	7	5,805	21
(b) Referred for Further Diagnosis	0	67	0	637	12	0	7	5	30	31	47	40	27	16	62	2	563	0
(c) Completed Referrals	0	9	0	90	0	0	0	4	4	9	7	3	0	3	4	1	188	0
7. Nurse-Teacher Conference	69	620	507	384	40	26	208	1,102	1,338	199	584	865	590	96	2,998	247	5,915	427
G. DENTAL HEALTH																		
1. Number of Dental Inspections	0	470	0	0	162	0	0	13	991	93	0	0	0	0	32,537	0	4,399	1,881
2. Number Requiring Treatment	0	451	0	0	152	0	0	17	926	88	0	0	0	0	13,075	0	3,902	1,610

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson
Child Health Services Cont'd.																	
5. Admissions to Nursing Service—																	
Infants	872	95	20	975	45	11	42	108	35	35	9	10	4,308	22	95	402	283
1-4	274	200	42	1,971	121	9	40	51	25	37	59	8	6,848	38	35	482	628
5-over	603	180	29	586	14	11	53	11	59	71	90	75	10,459	182	557	197	353
6. Field Nursing Visits—Infants	2,276	160	38	1,532	82	27	69	311	79	76	18	22	4,078	33	236	744	616
1-4	889	232	63	3,539	236	17	44	266	42	31	89	17	3,445	20	123	1,132	1,283
5-over	1,316	124	33	816	44	13	52	51	283	45	158	102	6,535	79	408	582	339
7. Office Nursing Visits—Infants	1,495	80	2	379	3	3	31	95	9	27	10	1	7,372	27	96	366	391
1-4	323	151	0	498	6	4	34	17	2	63	18	1	11,111	59	27	346	774
5-over	2,058	173	1	371	2	6	56	10	21	111	15	15	12,043	534	653	132	373
F. SCHOOL HEALTH																	
1. Pupils Examined by Physician with parent present	119	45	0	275	15	5	57	122	40	167	166	314	2,807	232	1	15	144
(b) Referred for Further Diagnosis	1	0	0	24	2	1	8	3	7	14	9	131	1,305	71	0	0	2
(c) Completed Referrals	1	0	0	5	1	0	8	3	7	6	0	7	1,143	0	0	0	0
2. Pupils Examined by Physician with parent not present	331	83	44	337	46	59	106	108	132	188	816	720	4,347	11	0	41	4
(b) Referred for Further Diagnosis	72	5	0	58	1	0	0	4	3	9	90	195	679	0	0	1	0
(c) Completed Referrals	10	0	0	0	1	0	0	0	3	1	25	26	178	0	0	0	0
3. Screening by other health dept. Personnel—Visual	15,714	507	41	1,986	212	57	867	1	131	268	12	80	55,117	163	8,319	719	1,194
(b) Referred for Further Diagnosis	2,056	104	14	168	8	5	17	1	24	23	2	20	2,429	8	829	49	54
(c) Completed Referrals	77	11	5	58	2	0	17	0	23	9	0	1	1,620	9	156	5	25
4. Screening by other health dept. Personnel—Audiometer testing	2,058	14	6	989	0	13	5	0	5	8	0	10	30,603	2	2,799	234	7
(b) Referred for Further Diagnosis	128	0	1	75	0	1	3	0	5	0	0	5	2,158	1	261	16	2
(c) Completed Referrals	2	0	1	16	0	0	3	0	2	0	0	0	1,150	0	0	2	0
7. Nurse-Teacher Conference	2,568	54	27	1,786	7	106	207	525	141	319	51	46	9,045	191	507	528	276
G. DENTAL HEALTH																	
1. Number of Dental Inspections	568	0	214	0	0	0	0	0	0	0	0	1,606	14,890	0	0	1,186	552
2. Number requiring Treatment	565	0	2	0	0	0	0	0	0	0	0	578	8,963	0	0	310	265

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Santa Rosa	Sarasota	Seminole	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington	Total for 1960
Child Health Services Cont'd.																	
5. Admissions to Nursing Service—																	
Infants	1,170	2,095	251	3	232	53	97	320	126	85	58	90	546	57	40	103	25,181
1-4	2,021	2,512	281	4	206	77	101	494	81	176	48	132	772	98	66	188	32,561
5-over	8,454	6,089	314	57	9	1,282	572	1,368	63	173	48	87	2,458	284	1,261	36	65,200
6. Field Nursing Visits—Infants	2,055	3,764	319	4	428	25	310	882	121	92	44	82	977	117	31	108	44,734
1-4	2,725	4,569	317	5	615	114	405	754	64	276	53	181	1,287	232	49	216	51,021
5-over	7,277	2,970	375	22	18	520	1,395	1,461	25	227	55	102	2,266	227	526	23	59,599
7. Office Nursing Visits—Infants	2,238	3,811	214	0	164	55	15	100	87	89	63	96	459	28	43	66	33,944
1-4	2,710	2,858	225	0	1	35	11	376	84	90	14	139	707	13	78	98	38,972
5-over	15,950	7,886	340	54	0	1,826	112	2,085	86	87	27	167	2,718	212	1,300	34	146,349
F. SCHOOL HEALTH																	
1. Pupils Examined by Physician with parent present	15,487	643	57	5	0	152	20	525	115	112	3	82	650	59	233	134	31,585
(b) Referred for Further Diagnosis	2,760	88	4	0	0	53	11	110	1	43	0	7	0	6	19	0	5,402
(c) Completed Referrals	2,160	7	0	1	0	54	6	6	0	0	0	3	0	2	1	0	3,594
2. Pupils Examined by Physician with parent not present	1,930	268	68	12	0	2,967	104	186	48	55	159	124	128	84	541	84	37,345
(b) Referred for Further Diagnosis	768	5	0	2	0	44	18	2	0	3	4	8	0	1	11	0	3,712
(c) Completed Referrals	540	4	0	10	0	42	4	1	0	0	1	5	1	2	2	0	959
3. Screening by other health dept. personnel—Visual	59,485	13,798	245	4	2,475	1,005	3,534	2,695	3,107	595	127	26	8,933	706	769	242	352,463
(b) Referred for Further Diagnosis	2,890	1,075	131	5	193	212	487	238	166	57	3	5	732	41	137	15	31,950
(c) Completed Referrals	2,797	143	42	1	0	120	153	48	35	9	3	2	237	41	29	14	11,086
4. Screening by other health dept. personnel—Audiometer testing	27,351	321	0	0	0	57	7,067	11	26	551	334	0	5,465	5	181	0	393,608
(b) Referred for Further Diagnosis	538	47	0	0	0	0	94	3	0	22	16	0	85	2	3	0	6,789
(c) Completed Referrals	404	7	0	0	0	0	33	0	0	1	0	0	7	2	0	0	2,524
7. Nurse-Teacher Conference	12,411	7,014	376	36	0	729	1,601	1,021	137	225	27	65	425	71	95	58	94,504
G. DENTAL HEALTH																	
1. Number of Dental Inspections	6,692	0	224	0	0	0	524	0	0	0	0	0	3,603	0	0	0	108,147
2. Number requiring Treatment	3,139	0	0	0	0	0	267	0	0	0	0	0	2,822	0	0	0	61,563

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	Dade	DeSoto	Dixie	Duval	Duval Special Program
Dental Health Cont'd.																	
3. Number completing treatment	376	41	0	0	0	221	0	8	24	0	13	0	227	1	28	474	0
4. Number admitted to clinic for treatment	1,222	119	0	0	0	504	0	83	57	0	156	0	1,177	0	79	1,183	0
5. Total fillings	2,223	163	0	0	0	2,342	0	124	86	0	179	0	3,970	0	83	2,963	0
6. Total extractions	278	120	0	0	0	554	0	51	19	0	99	0	1,359	0	30	969	0
7. Topical applications of fluoride	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
H. CHRONIC DISEASES																	
1. Admission to Cancer Service	99	10	26	49	49	194	8	6	5	33	63	19	77	19	2	2	0
2. Field Visits—Cancer	60	84	128	187	198	346	16	13	4	156	199	9	850	59	4	7	0
3. Office Visits—Cancer	156	7	2	81	112	388	2	2	1	11	84	19	79	43	5	0	0
4. Admission to Orthopedic Service	96	9	154	71	187	132	14	15	14	55	29	15	13	81	30	12	0
5. Field Visits—Orthopedic Service	171	10	499	287	613	450	47	57	19	208	109	14	57	82	56	25	0
6. Office Visits—Orthopedic Service	107	2	87	43	490	29	9	78	23	241	49	3	4	112	6	7	0
7. Admission to Diabetes Service	23	5	10	26	36	54	5	18	10	19	17	0	20	7	4	3	0
8. Field Visits—Diabetes	144	5	43	51	125	252	3	80	15	166	80	0	64	3	4	3	0
9. Office Visits—Diabetes	32	9	1	35	152	250	36	40	13	14	61	0	18	21	43	0	0
10. Admission to Cardiovascular Renal Disease	12	65	17	75	196	24	2	3	31	72	22	0	90	1	2	3	360
11. Field Visits—Cardiovascular Renal Disease	25	71	75	327	372	49	0	5	1	470	50	0	1,437	1	5	4	6,372
12. Office Visits—Cardiovascular Renal Disease	9	113	0	162	243	4	13	1	120	16	24	0	9	0	49	1	0
J. MENTAL HEALTH																	
1. Admission to Service—Children	396	0	5	3	163	233	16	42	23	45	176	0	994	42	10	38	0
2. Admission to Service—St. Hospital Pts.	125	2	46	27	61	27	11	5	27	22	8	6	238	1	4	106	0
3. Admission to Service—Other Adults	134	0	12	7	101	478	7	9	13	43	67	2	180	3	7	36	0
4. Field Visits—With Patients	678	3	162	70	221	194	42	54	39	125	190	7	769	29	13	152	0
5. Field Visits—About Patients	650	0	102	46	374	529	71	173	170	126	272	4	1,178	56	12	199	0
6. Office Visits—With Patients	780	1	15	31	626	1,359	13	16	8	27	702	5	5,129	22	6	27	0
7. Office Visits—About Patients	3,832	0	5	12	891	659	21	90	36	91	496	3	4,732	41	8	67	0
8. Mental Health Conferences	737	149	0	4	983	2,529	131	46	187	34	285	0	893	92	9	160	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson
Dental Health Cont'd.																	
3. Number completing treatment	146	0	2	0	0	0	0	0	0	0	0	10	1,925	0	0	0	81
4. Number Admitted to Clinic for Treatment	240	0	0	0	0	0	0	0	0	0	0	0	1,828	0	0	0	160
5. Total Fillings	600	0	16	0	0	0	0	0	0	0	0	0	4,359	0	0	0	130
6. Total Extractions	378	0	1	0	0	0	0	0	0	0	0	0	2,458	0	0	0	207
7. Topical Applications of Fluoride	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
H. CHRONIC DISEASES																	
1. Admission to Cancer Service	413	1	13	34	8	12	27	5	23	8	13	20	437	36	14	46	21
2. Field Visits—Cancer	1,860	1	26	149	9	34	42	2	39	10	28	72	706	29	66	195	76
3. Office Visits—Cancer	1,181	0	17	12	2	26	30	4	20	21	10	13	2,268	47	6	38	7
4. Admission to Orthopedic Service	283	1	52	107	5	1	32	2	21	16	17	27	835	60	45	140	31
5. Field Visits—Orthopedic Service	912	4	29	383	5	0	112	7	77	40	27	70	1,371	71	156	235	83
6. Office Visits—Orthopedic Service	64	0	78	102	0	1	79	0	6	10	1	12	281	114	30	232	7
7. Admission to Diabetes Service	188	5	15	31	2	6	10	3	32	16	3	22	719	49	33	30	35
8. Field Visits—Diabetes	878	13	19	103	9	8	33	0	26	64	5	7	1,615	4	147	109	45
9. Office Visits—Diabetes	548	16	84	70	1	16	21	5	44	87	2	28	6,950	316	15	149	114
10. Admission to Cardiovascular Renal Disease	313	4	26	154	13	20	62	8	2	46	2	5	978	31	6	59	25
11. Field Visits—Cardiovascular Renal Disease	2,369	10	1	754	14	34	70	0	2	101	1	23	2,835	61	31	155	76
12. Office Visits—Cardiovascular Renal Disease	614	7	73	496	79	24	238	14	0	129	7	8	1,080	34	4	286	10
J. MENTAL HEALTH																	
1. Admission to Service—Children	365	1	28	26	0	24	16	0	22	59	8	28	918	6	23	31	1
2. Admission to Service—St. Hospital Pts.	204	1	19	35	0	0	7	0	4	4	5	10	235	9	16	18	17
3. Admission to Service—Other Adults	247	0	11	76	0	5	12	0	6	5	0	37	407	9	25	13	2
4. Field Visits—With Patients	448	3	50	265	0	9	36	0	24	28	11	98	1,420	11	136	113	21
5. Field Visits—About Patients	594	0	168	220	0	24	80	0	59	61	73	187	767	5	260	269	8
6. Office Visits—With Patients	2,602	2	8	258	0	18	18	0	34	59	2	41	2,072	11	41	19	11
7. Office Visits—About Patients	2,646	0	16	72	0	30	22	0	78	104	1	71	2,678	24	34	9	5
8. Mental Health Conferences	1	0	289	249	0	14	209	0	77	15	112	41	233	10	49	250	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Lafayette	Lake	Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco
Dental Health Cont'd.																		
3. Number completing treatment	0	91	0	0	19	0	0	14	53	34	0	0	0	0	1,320	0	1,586	31
4. Number Admitted to Clinic for treatment	0	1,035	0	0	39	0	0	91	0	93	0	0	0	0	1,380	0	3,624	88
5. Total fillings	0	1,689	0	0	67	0	0	124	0	113	0	0	0	0	1,039	0	2,988	113
6. Total extractions	0	497	0	0	3	0	0	44	0	23	0	0	0	0	1,752	0	1,470	31
7. Topical Applications of Fluoride	0	5	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
H. CHRONIC DISEASES																		
1. Admission to Cancer Service	14	50	23	97	3	20	21	31	3	13	87	17	18	11	87	17	307	30
2. Field Visits—Cancer	40	115	28	13	3	13	29	56	6	20	268	33	48	22	16	7	355	16
3. Office Visits—Cancer	4	17	36	264	1	15	17	13	0	11	55	2	10	3	1,437	24	1,025	38
4. Admission to Orthopedic Service	19	78	79	80	15	30	25	20	107	16	91	25	75	21	169	18	125	67
5. Field Visits—Orthopedic Service	71	129	105	263	50	38	103	34	400	42	207	64	246	37	322	44	894	73
6. Office Visits—Orthopedic Service	8	36	140	904	6	8	7	7	24	4	73	10	74	11	101	30	73	186
7. Admission to Diabetes Service	5	23	12	16	15	5	9	56	14	9	47	12	38	6	27	8	29	28
8. Field Visits—Diabetes	17	41	11	8	6	2	9	133	60	36	102	24	57	16	51	14	216	19
9. Office Visits—Diabetes	46	17	8	176	27	56	77	16	10	12	131	46	51	13	126	115	107	90
10. Adm. to Cardiovascular Renal Disease	35	27	2	2	71	106	7	128	9	5	109	14	39	0	43	15	67	24
11. Field Visits—Cardiovascular Renal Disease	153	51	2	4	52	385	13	79	55	6	230	38	39	0	90	12	491	8
12. Office Visits—Cardiovascular Renal Disease	118	15	0	0	314	490	5	97	4	0	78	2	110	0	41	140	191	53
J. MENTAL HEALTH																		
1. Admission to Service—Children	1	20	49	254	15	3	4	76	112	55	53	32	123	37	692	7	36	10
2. Adm. to Service—State Hospital Pts.	2	28	74	38	26	5	5	56	229	1	20	2	49	0	82	0	334	30
3. Admission to Service—Other Adults	3	5	30	333	9	14	4	54	123	13	71	8	22	2	58	6	77	6
4. Field Visits—With Patients	10	29	124	183	64	10	18	107	247	30	165	22	129	6	221	21	320	31
5. Field Visits—About Patients	1	54	226	221	111	13	7	285	241	73	270	109	619	70	299	26	613	48
6. Office Visits—With Patients	0	9	55	1,917	30	63	13	86	99	43	42	16	11	52	836	13	77	25
7. Office Visits—About Patients	0	22	408	932	21	12	16	194	288	130	61	43	106	67	2,262	21	553	36
8. Mental Health Conferences	0	0	120	80	26	28	4	216	281	42	128	475	142	22	60	10	155	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Santa Rosa	Sarasota	Seminole	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington	Total for 1960
Dental Health Cont'd.																	
3. Number completing treatment	916	0	0	0	0	0	0	0	0	0	0	0	130	0	0	0	7,771
4. Number Admitted to Clinic for Treatment	1,081	0	0	0	0	0	0	0	0	0	0	0	342	0	0	0	14,531
5. Total fillings	4,769	0	0	0	0	0	0	0	0	0	0	0	1,338	0	0	0	29,478
6. Total extractions	786	0	0	0	0	0	0	0	0	0	0	0	501	0	0	0	11,632
7. Topical applications of fluoride	0	0	0	0	0	0	0	0	0	0	0	0	67	0	0	0	106
H. CHRONIC DISEASES																	
1. Admission to Cancer Service	517	401	17	0	17	62	47	15	21	10	36	10	80	7	50	24	3,955
2. Field Visits—Cancer	1,849	210	38	0	23	62	421	22	25	42	34	4	765	19	41	47	10,349
3. Office Visits—Cancer	1,306	1,138	25	0	5	127	28	8	45	3	85	29	26	3	61	39	10,594
4. Admission to Orthopedic Service	101	158	35	0	41	58	53	51	60	68	44	12	118	21	69	42	4,593
5. Field Visits—Orthopedic Service	775	462	103	0	126	140	208	172	84	138	11	5	595	55	113	87	12,482
6. Office Visits—Orthopedic Service	30	130	8	0	70	257	11	73	58	123	82	13	9	6	91	74	4,989
7. Admission to Diabetes Service	83	242	4	9	3	24	16	12	22	30	13	7	70	12	36	17	2,415
8. Field Visits	245	788	11	11	15	52	107	27	9	48	0	3	2,074	50	131	11	8,527
9. Office Visits—Diabetes	656	297	6	9	0	110	17	39	58	116	46	81	305	32	238	156	12,476
10. Admission to Cardiovascular Renal Disease	332	186	18	0	2	24	64	17	11	29	2	7	56	1	38	11	4,230
11. Field Visits—Cardiovascular Renal Disease	4,310	380	26	0	4	36	848	47	15	21	2	2	1,030	0	56	7	24,293
12. Office Visits—Cardiovascular Renal Disease	547	301	18	0	0	118	3	15	11	49	0	39	1	2	100	49	6,778
J. MENTAL HEALTH																	
1. Admission to Service—Children	35	297	28	0	172	56	64	108	17	14	9	0	164	22	8	0	6,315
2. Admission to Service—St. Hospital Pts.	285	194	54	0	0	19	94	20	10	6	7	2	123	7	11	5	3,118
3. Admission to Service—Other Adults	140	126	32	1	85	10	243	47	5	10	2	0	85	4	0	0	3,582
4. Field Visits—With Patients	542	448	109	1	14	51	619	217	11	12	7	4	294	26	26	4	9,543
5. Field Visits—About Patients	708	550	141	0	78	69	1,060	999	21	31	8	1	341	83	17	4	14,135
6. Office Visits—With Patients	176	1,867	29	0	1,271	34	264	56	37	5	27	0	709	8	13	0	21,846
7. Office Visits—About Patients	497	1,578	9	0	1,016	51	662	588	41	5	7	1	1,325	15	16	0	27,757
8. Mental Health Conferences	234	439	2	0	166	38	569	229	0	2	0	0	1,190	79	0	0	12,525

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	Dade	DeSoto	Dixie	Duval	Duval Special Program
K. MISCELLANEOUS																	
1. Admission Morbidity Service	361	91	56	325	399	91	18	81	15	226	134	82	34	24	44	51	0
2. Field and Office Visits—Morbidity	771	180	114	669	602	241	70	400	41	658	386	115	279	61	200	96	0
3. General Medical Examinations	144	0	0	156	326	1,491	42	0	37	20	18	11	3,117	13	3	0	0
4. Health Cards Issued	3,354	99	2,256	251	2,133	15,771	82	390	294	259	462	246	18,091	340	205	5,145	0
5. Visits in the Interest of Vital Statistics	20	1	130	41	80	115	16	10	6	177	4	0	65	27	108	0	0
6. Conferences or Visits in the Interest of Civil Defense	7	0	2	14	9	10	0	0	0	3	1	0	12	0	5	0	0
7. Visits in the Interest of Reported Accidents, including Poisoning	50	0	3	5	7	113	0	0	0	0	0	0	363	0	4	122	0
M. NURSING HOMES																	
1. Number of Nursing Homes Admitted to Service	3	0	3	1	4	24	0	0	0	3	0	1	82	0	0	64	0
2. Visits to Nursing Homes	158	0	19	7	61	89	0	0	0	9	0	6	1,033	0	0	194	0
P. SANITATION																	
1. Approved Water Supplies Installed, Private & Semi-Public	333	0	93	0	28	974	0	1	0	2	0	0	19	0	1	4,979	0
2. Approved Water Supplies Installed, New Public Water Connections	5	0	0	0	5	7	0	23	1	3	1	0	59	0	0	241	0
3. New Specification Privies Installed	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	6	0
4. Percolation Water Table or Soil Log Test	1,116	0	260	36	2,894	66	8	26	4	181	18	5	0	26	9	1,704	0
5. Subdivision Analysis	35	0	6	1	118	82	6	2	0	1	2	1	259	1	0	10	0
6. Pollution Survey	20	0	0	5	266	194	0	28	0	0	1	0	83	3	0	3	0
7. New Specification Septic Tanks Installed	838	28	300	118	2,134	4,751	60	439	41	50	142	311	2	85	13	628	0
8. Rabies—Number of Animal Bites Investigated	325	7	74	28	296	1,488	4	106	3	87	55	22	3,253	20	3	953	0
9. Field Visits for Rabies Investigation	708	10	126	42	643	3,198	4	77	7	319	77	32	11,849	48	2	953	0
10. Complaints Investigated	680	17	213	64	972	1,909	14	79	36	67	97	22	7,408	45	13	2,692	0
11. Nuisances Corrected	327	6	89	39	334	1,027	5	50	9	13	86	20	4,329	10	6	894	0
12-21. Field Visits	6,683	535	2,552	145	13,644	13,980	218	2,639	567	768	1,020	1,356	61,301	642	157	9,175	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson
K. MISCELLANEOUS																	
1. Admission Morbidity Service	324	90	9	98	45	71	28	300	18	143	9	44	814	62	29	52	34
2. Field and Office Visits—Morbidity	2,876	308	32	704	153	240	133	488	120	492	40	77	4,769	77	96	146	98
3. General Medical Examinations	493	75	62	44	2	42	32	4	7	42	134	42	654	60	40	62	26
4. Health Cards Issued	10,425	233	364	892	75	91	278	302	342	357	238	547	40,348	304	607	577	142
5. Visits in the Interest of Vital Statistics	64	39	11	366	2	0	132	4	5	12	1	41	11	6	4	71	26
6. Conferences or Visits in the Interest of Civil Defense	9	0	0	0	0	1	1	0	1	1	0	13	31	0	2	0	0
7. Visits in the Interest of Reported Accidents, including Poisoning	173	0	0	0	4	0	0	0	0	0	0	0	207	0	0	0	0
M. NURSING HOMES																	
1. Number of Nursing Homes Admitted to Service	16	0	0	0	0	0	0	0	2	0	4	2	34	2	2	0	1
2. Visits to Nursing Homes	59	0	0	0	0	0	0	0	11	0	12	5	999	15	25	0	17
P. SANITATION																	
1. Approved Water Supplies Installed, Private & Semi-Public	532	0	0	50	0	0	2	0	3	1	0	74	917	3	0	1	10
2. Approved Water Supplies Installed, New Public Water Connections	806	0	0	465	0	1	68	0	1	3	0	4	1,187	4	0	0	0
3. New Specification Privies Installed	27	0	0	108	0	0	0	9	0	0	0	0	54	1	0	3	0
4. Percolation Water Table or Soil Log Test	53	60	30	17	0	0	9	0	0	5	41	10	558	42	122	6	1
5. Subdivision Analysis	8	4	0	2	0	1	0	0	0	7	1	80	66	0	12	1	0
6. Pollution Survey	9	0	0	62	0	0	2	0	2	5	0	2	55	0	0	0	0
7. New Specification Septic Tanks Installed	1,405	56	9	152	80	20	54	13	82	192	37	654	2,476	17	126	40	16
8. Rabies—Number of Animal Bites Investigated	1,113	6	12	16	5	11	6	11	12	3	0	45	2,631	10	15	17	9
9. Field Visits for Rabies Investigation	3,612	11	45	21	5	29	8	24	22	14	0	102	15,927	17	40	38	6
10. Complaints Investigated	3,348	11	75	63	4	18	8	11	49	88	58	139	3,059	32	208	19	13
11. Nuisances Corrected	2,488	10	31	193	4	6	2	5	12	52	18	57	3,752	24	59	6	7
12-21. Field Visits	26,615	207	447	1,015	554	486	650	328	909	1,480	496	2,664	56,445	155	1,283	464	385

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Lafayette	Lake	Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco
K. MISCELLANEOUS																		
1. Admission Morbidity Service	29	33	148	70	72	31	15	85	4	4	256	73	182	8	34	17	481	80
2. Field and Office Visits—Morbidity	80	59	246	126	270	335	36	234	56	28	504	156	1,435	13	231	42	1,782	98
3. General Medical Examinations	0	18	80	46	163	4	35	355	544	0	6	29	144	0	0	19	316	1
4. Health Cards Issued	16	1,114	2,925	2,527	543	57	243	3,517	2,012	0	1,323	619	1,394	163	2,448	563	7,492	1,383
5. Visits in the Interest of Vital Statistics	11	18	1	10	5	8	7	2	140	12	21	222	34	1	29	0	12	1
6. Conferences or Visits in the Interest of Civil Defense	0	0	6	0	1	0	1	14	1	2	33	13	1	0	0	0	3	0
7. Visits in the Interest of Reported Accidents, including Poisoning	0	0	1	12	1	0	0	34	20	0	5	1	4	1	133	0	82	0
M. NURSING HOMES																		
1. Number of Nursing Homes Admitted to Service	0	6	4	2	1	0	0	9	3	1	1	1	0	1	24	10	33	7
2. Visits to Nursing Homes	0	26	17	5	7	0	0	47	31	4	1	1	0	6	146	78	127	57
P. SANITATION																		
1. Approved Water Supplies Installed, Private and Semi-Public	1	0	0	0	0	0	1	21	196	45	5	0	3	6	1	0	1	8
2. Approved Water Supplies Installed, New Public Water Connections	0	0	0	1	0	4	0	3	8	14	0	18	2	2	3	0	3	1
3. New Specification Privies Installed	0	0	0	4	0	0	0	3	2	0	0	1	3	0	2	0	11	0
4. Percolation Water Table or Soil Log Test	12	136	0	69	2	0	4	231	205	170	0	80	70	41	4,840	49	138	28
5. Subdivision Analysis	0	32	0	5	4	0	0	10	52	0	0	14	1	0	215	46	12	1
6. Pollution Survey	0	7	306	380	2	0	0	6	46	3	2	8	3	0	415	0	4	1
7. New Specification Septic Tanks Installed	6	944	330	343	107	2	17	435	475	157	229	211	242	58	3,343	121	1,718	112
8. Rabies—Number of Animal Bites Investigated	3	24	101	177	17	2	10	169	124	19	154	2	132	21	1,078	132	272	17
9. Field Visits for Rabies Investigation	9	51	179	927	40	2	21	342	101	44	183	31	182	66	1,298	210	14	31
10. Complaints Investigated	6	207	55	376	9	3	17	358	757	56	185	61	170	9	5,778	118	1,608	95
11. Nuisances Corrected	3	35	15	88	8	0	8	251	301	30	161	16	52	4	1,617	20	569	18
12-21. Field Visits	42	2,320	1,232	3,428	901	241	292	3,199	3,584	1,026	4,302	731	3,099	329	55,950	956	10,620	251

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Pinellas	Polk	Putnam	St. Johns	St. Lucie	Santa Rosa	Sarasota	Seminole	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington	Total for 1960
K. MISCELLANEOUS																	
1. Admission Morbidity Service	1,268	557	84	5	2	146	136	86	43	65	58	150	196	15	118	19	8,772
2. Field and Office Visits—Morbidity	8,046	1,729	595	5	2	265	1,457	338	61	428	78	260	2,020	50	140	27	36,964
3. General Medical Examinations	105	35	205	0	0	79	203	0	5	12	0	30	1,965	22	97	182	11,899
4. Health Cards Issued	28,757	7,279	956	79	679	406	1,684	642	435	242	453	52	5,199	215	417	280	181,614
5. Visits in the Interest of Vital Statistics	1	84	1	1	2	1	49	17	15	5	9	24	70	15	5	0	2,428
6. Conferences or Visits in the Interest of Civil Defense	19	4	0	0	0	1	3	0	7	0	0	0	0	1	2	0	234
7. Visits in the Interest of Reported Accidents, including Poisoning	0	30	0	0	0	0	88	0	0	0	0	0	7	0	0	0	1,470
M. NURSING HOMES																	
1. Number of Nursing Homes Admitted to Service	35	22	7	0	4	0	6	12	1	1	0	0	22	0	0	1	462
2. Visits to Nursing Homes	408	125	41	0	47	0	83	33	8	10	0	0	453	0	0	15	4,495
P. SANITATION																	
1. Approved Water Supplies Installed, Private and Semi-Public	68	3	10	0	3	0	56	29	0	0	1	2	6	0	2	8	8,499
2. Approved Water Supplies Installed, New Public Water Connections	36	0	21	0	0	0	13	0	0	0	9	0	1	0	45	1	3,069
3. New Specification Privies Installed	28	25	7	0	0	0	0	2	11	3	0	24	4	0	0	1	345
4. Percolation Water Table or Soil Log Test	5,225	2,138	97	12	436	29	575	473	15	49	10	0	318	19	14	0	22,792
5. Subdivision Analysis	1	5	5	1	2	0	26	67	1	1	1	0	39	2	5	0	1,254
6. Pollution Survey	25	1	0	1	5	1	3	18	2	0	3	9	6	0	0	0	1,997
7. New Specification Septic Tanks Installed	3,406	2,008	118	13	423	53	1,667	756	87	27	27	24	1,517	3	99	23	34,470
8. Rabies—Number of Animal Bites Investigated	598	497	32	6	110	60	328	90	24	9	15	10	211	6	19	22	15,137
9. Field Visits for Rabies Investigated	1,495	1,207	42	6	334	119	1,093	115	60	11	35	15	611	11	19	20	46,890
10. Complaints Investigated	3,045	664	119	38	173	35	895	355	23	11	28	16	383	11	91	18	37,299
11. Nuisances Corrected	1,523	305	41	10	165	8	570	66	15	8	22	7	171	1	35	14	20,127
12-21 Field Visits	36,409	6,563	2,082	193	4,419	1,535	6,309	2,246	677	226	466	849	6,531	112	729	128	371,942

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	Dade	DeSoto	Dixie	Duval	Duval Special Program
R. PROTECTION OF FOOD AND MILK																	
1. Food-handling Establishments Admitted to Service	452	47	218	67	365	1,533	19	68	25	109	69	20	6,337	26	16	845	0
2. Field Visits to Food-handling Establishments	2,482	173	1,458	711	2,032	4,246	314	564	70	871	241	187	41,224	93	136	2,673	0
3. Number of Food-handlers Trained	198	254	124	0	139	0	0	0	0	0	0	0	0	0	0	3	0
4. Dairy Farms Admitted to Service	15	4	5	3	3	0	12	1	1	9	0	2	112	3	0	0	0
5. Field Visits to Dairy Farms	177	8	97	29	73	0	219	5	1	69	0	20	980	47	0	0	0
6. Milk & Milk Products Plants Admitted to Service	6	0	3	2	2	5	0	1	0	2	0	1	183	0	0	0	0
7. Field Visits to Milk & Milk Products Plants	55	0	19	30	2	54	0	4	0	15	0	16	3,610	0	0	0	0
8. Cows Tuberculin Tested	0	0	0	875	0	138	0	0	0	0	0	0	4,426	0	0	0	0
9. Cows Bangs Tested	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
10. Dairy Farms under Mastitis Control Program	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V. HEALTH INFORMATION																	
1. Meetings Attended	1,455	64	62	69	552	352	76	150	115	216	220	14	1,667	38	25	106	0
2. Lectures and Motion Picture Showings	661	45	117	14	310	212	69	236	88	91	56	2	1,265	8	12	46	0
4. Radio & Television Programs	55	0	0	1	12	5	0	11	0	1	11	0	41	11	0	1	0
5. News Articles Published	10	15	0	19	13	0	3	40	9	29	9	2	74	20	13	1	0
6. Exhibits Displayed	13	4	0	0	6	0	0	37	4	14	2	0	38	11	4	0	0
X. LABORATORY																	
1-22. Specimens Examined	9,895	1,664	5,878	1,706	12,622	29,623	1,308	3,906	1,840	1,695	3,908	2,184	79,413	1,848	2,668	21,006	0

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson
R. PROTECTION OF FOOD AND MILK																	
1. Food-handling Establishments Admitted to Service	686	74	39	92	7	30	113	13	24	45	14	142	2,840	104	73	117	24
2. Field Visits to Food-handling Establishments	4,983	517	278	363	115	53	1,042	46	507	266	31	424	35,193	674	743	1,252	175
3. Number of Food-handlers Trained	360	0	0	0	0	0	0	0	0	0	0	0	14	32	0	0	0
4. Dairy Farms Admitted to Service	52	1	0	7	0	3	1	0	4	5	1	3	99	16	4	26	8
5. Field Visits to Dairy Farms	1,010	3	0	172	0	28	17	0	50	18	1	32	2,767	222	45	286	52
6. Milk & Milk Products Plants Admitted to Service	5	0	0	2	0	0	0	0	0	1	0	2	44	0	3	1	1
7. Field Visits to Milk & Milk Products Plants	505	0	0	30	0	0	0	0	0	8	0	2	1,271	0	10	24	4
8. Cows Tuberculin Tested	3,197	0	0	72	0	0	45	0	0	0	0	0	21,827	964	1	0	970
9. Cows Bangs Tested	88	0	0	0	0	0	0	0	0	0	0	0	477	0	1	0	972
10. Dairy Farms under Mastitis Control Program	0	0	0	0	0	0	0	0	0	0	0	0	99	32	0	0	0
V. HEALTH INFORMATION																	
1. Meetings Attended	442	14	40	207	4	62	30	61	91	77	32	66	1,798	35	380	94	68
2. Lectures and Motion Picture Showings	388	1	34	118	4	15	38	6	60	13	18	19	785	86	72	128	90
4. Radio & Television Programs	0	0	0	0	0	23	5	0	30	1	0	0	34	23	0	1	0
5. News Articles Published	30	4	5	29	0	19	11	12	5	47	0	7	51	9	0	1	18
6. Exhibits Displayed	0	0	11	0	0	1	5	0	0	6	0	0	9	3	0	3	1
X. LABORATORY																	
1-22. Specimens Examined	31,704	1,268	1,277	5,488	309	703	1,761	1,213	2,446	139	805	2,426	118,437	3,346	2,589	6,099	1,032

TABLE 6 (Continued)
SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Lafayette	Lake	Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco
R. PROTECTION OF FOOD AND MILK																		
1. Food-handling Establishments Admitted to Service	9	124	323	438	54	7	31	318	78	232	146	46	100	56	1,017	36	930	243
2. Field Visits to Food-handling Establishments	29	319	581	2,582	90	41	109	1,251	600	395	514	343	324	194	3,121	281	2,315	663
3. Number of Food-handlers Trained	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,148	0	0	0
4. Dairy Farms Admitted to Service	21	10	4	14	1	0	9	28	18	8	0	0	3	21	79	9	33	24
5. Field Visits to Dairy Farms	345	25	52	95	5	0	148	269	326	113	0	0	62	150	182	114	171	214
6. Milk & Milk Products Plants Admitted to Service	0	3	7	7	1	0	1	2	3	2	4	0	1	1	24	0	28	0
7. Field Visits to Milk & Milk Products Plants	0	3	40	44	5	0	16	14	35	3	14	0	22	4	261	0	1,091	0
8. Cows Tuberculin Tested	349	0	0	264	0	0	800	4,958	1,128	2,385	0	0	0	12,041	0	0	30,184	0
9. Cows Bangs Tested	0	0	0	159	0	0	0	0	0	0	0	1	0	1,120	0	0	19,370	0
10. Dairy Farms Under Mastitis Control Program	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	196	0
V. HEALTH INFORMATION																		
1. Meetings Attended	6	44	271	74	38	11	37	626	213	86	202	230	83	17	497	31	1,017	79
2. Lectures and Motion Picture Showings	3	80	126	128	71	1	49	454	67	31	127	137	125	20	1,434	29	642	58
4. Radio & Television Programs	0	0	35	2	0	0	3	3	9	0	5	2	14	0	26	0	0	0
5. News Articles Published	0	0	19	96	1	1	11	15	32	0	4	31	17	0	76	0	3	2
6. Exhibits Displayed	0	0	6	0	0	0	2	2	2	0	1	14	3	0	5	0	21	0
X. LABORATORY																		
1-22. Specimens Examined	593	3,730	7,480	19,632	2,339	1,088	2,130	11,326	7,400	1,375	6,652	2,830	4,192	1,177	21,006	2,661	21,998	3,453

TABLE 6 (Continued)

SOME MAJOR ACTIVITIES OF LOCAL HEALTH UNITS DURING 1960

	Pinellas	Polk	Putnam	St. John's	St. Lucie	Santa Rosa	Sarasota	Seminole	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington	Total for 1960
R. PROTECTION OF FOOD AND MILK																	
1. Food-handling Establishments Admitted to Service	2,446	1,130	198	17	287	74	439	70	38	66	75	14	949	37	107	63	24,850
2. Field Visits to Food-handling Establishments	11,974	6,869	900	41	3,649	265	1,478	462	197	675	227	47	4,415	124	261	324	149,797
3. Number of Food-handlers Trained	204	222	0	0	0	0	0	0	0	0	25	0	0	0	0	0	2,723
4. Dairy Farms Admitted to Service	17	53	4	1	6	20	7	7	9	6	0	3	23	0	15	11	864
5. Field Visits to Dairy Farms	313	552	34	4	44	149	39	39	111	76	0	53	525	0	189	294	11,121
6. Milk & Milk Products Plants Admitted to Service	44	2	0	1	4	0	4	3	0	0	2	0	13	0	4	1	426
7. Field Visits to Milk & Milk Products Plants	924	27	0	1	31	0	22	3	0	0	2	0	260	0	26	1	8,508
8. Cows Tuberculin Tested	4,507	6,999	0	0	1,986	0	215	0	632	138	0	0	0	0	1,043	594	100,238
9. Cows Bangs Tested	2,867	0	0	0	807	0	207	0	264	11	0	0	0	0	2	23	26,370
10. Dairy Farms under Mastitis Control Program	18	49	0	0	0	0	4	0	8	0	0	0	0	0	15	0	427
V. HEALTH INFORMATION																	
1. Meetings Attended	973	178	113	25	71	202	231	204	43	40	84	24	324	10	50	10	14,823
2. Lectures and Motion Picture Showings	1,468	596	21	1	50	46	166	137	29	20	89	17	79	75	80	6	11,519
3. Radio & Television Programs	42	9	6	0	0	0	8	0	0	0	0	0	0	0	3	0	428
4. News Articles Published	115	45	0	3	16	15	71	24	26	10	8	11	14	2	10	0	1,188
5. Exhibits Displayed	24	2	6	0	0	0	10	0	0	0	2	0	0	2	19	2	295
X. LABORATORY 1-22. Specimens Examined	53,480	27,292	4,345	342	3,655	3,304	10,016	2,908	2,778	1,649	1,262	1,405	8,481	1,903	4,378	1,799	612,215

BUREAU OF VITAL STATISTICS

EVERETT H. WILLIAMS, JR., M.S., Hyg.
Director

Vital records in Florida consist of records of the following events: birth, stillbirth, death, marriage, annulment of marriage, divorce, legal change of name and adoption. These events are recorded by legal requirement at the time of occurrence through an established registration system and the records have documentary value in a court of law. In addition to the legal value the records have a statistical value and public health agencies are the principal users of statistics derived from vital records.

COLLECTION

Collection of records is one of the primary functions of a vital statistics system. At the present time particular emphasis is being placed upon promptness of filing birth and death records. Last year 94.2 per cent of all births and 97.5 per cent of all deaths were registered at this Bureau by the fifth of the following month. The gradual improvement in promptness of filing records is gratifying. However, there are still a number of counties showing less than 80 per cent of certificates filed on time.

One measurement of the relative efficiency of birth and death registration is the "Vital Statistics Scoreboard" which is published annually (Table 13). The top 10 counties are to be congratulated on their superior performance. They are Wakulla, Duval, Dade, Hillsborough, Orange, Citrus, Jefferson, Sarasota, Broward and Martin.

Last year a total of 222,759 current certificates were registered with the bureau, an increase of 3.3 per cent over the preceding year.

INDEXING

As reported last year the re-indexing project for old records which was started several years ago is still progressing slowly. No personnel are available for full-time work on the project, so it is being carried on as a spare-time job whenever current work is completed.

CERTIFICATIONS

The issuance of certified photocopies and other certifications is one of the large-volume jobs performed by the bureau. Last year 114,324 requests for certifications were received and processed. This figure represents an increase of 6.6 per cent over the previous year and is a good index of the increase in work load in the bureau.

AMENDMENTS

The amendment of records is one of the most complex and troublesome functions of the bureau. Numerous requests are received to have records corrected. In each case the applicant must submit evidence to substantiate his request and bureau personnel must determine whether sufficient proof has been submitted. Every effort is made to correct minor errors as easily as possible while making sure that sufficient evidence is obtained for major corrections to maintain the validity of the record. During the year considerable time was spent in drafting revised administrative procedures for amendments. It is hoped these procedures can be effected early in 1961.

DELAYED REGISTRATION OF BIRTH

A "Delayed Birth Certificate" is one which is filed after the person's fourth birthday. It must be accompanied by documents which verify the date of birth, place of birth and parentage. Requirements for documentary evidence must be sufficient to minimize the filing of fradulent certificates. Bureau personnel must explain requirements for evidence in writing and orally, and must determine when sufficient proof has been submitted. In 1960 a total of 3241 delayed birth certificates were filed. This is approximately the same as for the preceding year.

ADOPTIONS

Legal adoptions have increased rapidly in this state. In 1960 a total of 4384 adoption decrees were received from the courts. This represents a 12.3 per cent increase over 1959. When an adoption decree is received for a person born in Florida a new birth certificate is substituted for the original certificate. The new certificate shows the new parents and does not disclose the fact of adoption. The original certificate is sealed and is only available upon court order or request of the registrant if of legal age. Adoption decrees received for persons born in other states are forwarded to the vital statistics office of the state of birth for similar processing.

POPULATION

The official U. S. Census population count of the state as of April 1, 1960 was 4,951,560. This is a gain of 78.7 per cent over the population count for 1950. The population count by color or race has not yet been released by the Census Bureau. It should be made available during the first 6 months of 1961. The census count for Florida indicates that our previous estimates were slightly low. When final census figures by race are received, revised estimates will be made for the period 1951-1959.

STATISTICS

This report contains a brief summary of vital statistics for 1960. A more detailed analysis of these statistics can be found in Supplement

No. I of this report entitled FLORIDA VITAL STATISTICS, 1960. Preliminary 1960 figures have been used in this report because of the time lag in receipt of records, but the supplement mentioned above will contain final figures. Final data for 1959 are contained in Tables 9a and 10a.

BIRTHS

The preliminary birth figure for 1960 is 115,610, which gives an increase of about 80 per cent over the 64,370 births in 1950. During this same period white births rose 85 per cent, from 45,699 to 84,377, and the nonwhite went from 18,671 to 31,233 (67 per cent). However, it should be noted that the birth rate per 1000 population changed only from 23.2 in 1950 to 23.3 in 1960 (up 0.4 per cent). The white birth rate dropped from 21.1 in 1950 to 21.0 in 1960 (0.5 per cent) and the nonwhite rate increased from 30.8 to 33.4 (8.4 per cent). Therefore, the large increase in the number of births resulted almost entirely from the expansion in population.

DEATHS

Preliminary figures show 47,719 deaths to Florida residents during 1960, of which 38,664 were white and 9055 were nonwhite, compared with a death total of 26,525 in 1950 with 19,443 white and 7082 nonwhite. This reveals a percentage increase of 98.9 for the white and 27.9 among the nonwhite, with total deaths rising 79.9 per cent. However, this gain in the number of deaths does not reflect the whole picture, as the death rate per 100,000 population remained the same with a rate of 9.6 in both 1950 and 1960. The white death rate rose from 9.0 in 1950 to 9.6 in 1960 (6.7 per cent) and the nonwhite rate declined from 11.7 in 1950 to 9.7 in 1960 (17.1 per cent).

Listed in Table 9 are the 10 leading causes of death with rates per 100,000 population for 1960 with the comparative position of these causes in 1950. It is of interest to note that the first 6 of these causes have remained the same throughout the past decade. Of the top 6 causes, only 2 have experienced a decline in the rate per 100,000 population; the rate for all accidents declined from 68.6 in 1950 to 58.6 in 1960, and diseases of early infancy went from 47.7 to 41.6. The remaining 4 of the 10 leading causes changed as diabetes mellitus moved into seventh place from tenth with a 1960 rate of 14.9 per 100,000 population compared with 13.4 in 1950. General arteriosclerosis moved from ninth place in 1950 with a rate of 16.5 to eighth place and a rate of 14.8 in 1960. Suicides ranking twelfth in 1950 with a rate of 11.4, moved up to ninth place in 1960 with a rate of 13.5. The most dramatic change occurred in the rise of other diseases of the circulatory system from sixteenth place in 1950 with a rate per 100,000 population of 7.0 to tenth place in 1960 with a rate of 13.2. Nephritis and nephrosis, seventh place in 1950, and tuberculosis (all forms) eighth, dropped to rankings of 14 and 18 respectively.

MARRIAGES, DIVORCES AND ANNULMENTS

There were 39,315 marriages recorded in Florida during 1960, giving an increase of 42.5 per cent over 1950 when 27,588 marriages were recorded. However, the rate per 1000 population declined from 10.0 in 1950 to 7.9 in 1960 (21.0 per cent). Divorces and annulments increased from 18,033 in 1950 to 19,511 in 1960 (8.2 per cent); while the rate per 1000 population dropped from 6.5 in 1950 to 3.9 in 1960 (40.0 per cent).

TABLE 7
ACTIVITIES OF THE BUREAU OF VITAL STATISTICS DURING THE YEARS 1959 AND 1960

Activity	1959	1960	Per Cent Change
Current certificates filed	215,624	222,759	+ 3.3
Delayed birth certificates filed	3,264	3,241	− 0.7
Adoption decrees received	3,904	4,384	+12.3
Amended certificates filed for adoptions	3,404	3,601	+ 5.8
Legal changes of name received	839	976	+16.3
Requests for certifications:			
Total	107,252	114,324	+ 6.6
Fee paid	86,700	90,700	+ 4.6
Free	20,572	23,624	+14.8
Photostats made	133,140	139,709	+ 4.9
Birth registration cards made	22,036	23,133	+ 5.0
Fees collected and transmitted to State Treasurer	$137,636.33	$142,917.91	+ 3.8

TABLE 8
RESIDENT BIRTHS AND DEATHS WITH RATES PER 1,000 POPULATION, FLORIDA, 1940, 1950-1960

Year	Population	Births	Birth Rate	Deaths	Death Rate
1960*	4,951,560	115,610	23.3	47,719	9.6
1959	4,730,300	112,733	23.8	44,179	9.3
1958	4,448,000	108,014	24.3	43,353	9.7
1957	4,250,400	103,806	24.4	39,937	9.4
1956	3,897,400	97,320	25.0	36,705	9.4
1955	3,643,562	89,112	24.5	33,295	9.1
1954	3,481,528	84,831	24.4	31,503	9.0
1953	3,111,100	80,087	25.7	30,529	9.8
1952	3,006,400	74,219	29.7	29,136	9.7
1951	2,901,800	70,431	24.3	27,857	9.6
1950	2,797,100	64,370	23.0	26,525	9.5
1940	1,915,155	33,696	17.6	21,458	11.2

*1960 data based upon preliminary totals.

TABLE 9
TEN LEADING CAUSES OF DEATH WITH RATES PER 100,000 POPULATION, FLORIDA, 1950 AND 1960

1960 Rank	CAUSE OF DEATH	1960		1950		1950 Rank
		Deaths	Rate	Deaths	Rate	
1	Diseases of the heart (410-443)	16,995	343.2	8,666	312.7	1
2	Malignant neoplasms (140-205)	7,719	155.9	3,661	132.1	2
3	Cerebral vascular disease (330-334)	5,491	110.9	3,021	109.0	3
4	All accidents (800-962)	2,903	58.6	1,902	68.6	4
5	Diseases of early infancy (760-776)	2,059	41.6	1,323	47.7	5
6	Influenza and pneumonia (480-493)	1,640	33.1	731	26.4	6
7	Diabetes mellitus (260)	739	14.9	370	13.4	10
8	General arteriosclerosis (450)	733	14.8	458	16.5	9
9	Suicide (963, 970-979)	667	13.5	315	11.4	12
10	Other diseases of circulatory system (451-468)	652	13.2	195	7.0	16
14	Nephritis and nephrosis (490-494)	390	7.9	593	21.4	7
18	Tuberculosis—all forms (001-019)	206	4.2	522	18.8	8

TABLE 10

RESIDENT DEATHS AND DEATH RATES BY CAUSE, BY RACE, FLORIDA, 1960 (PRELIMINARY)

CAUSE OF DEATH (Numbers in parentheses refer to the International List of Causes of Death)	DEATHS			Rate per 100,000 Population		
	Total	White	Nonwhite	Total	White	Nonwhite
TOTAL DEATHS	47,719	38,664	9,055	9.6*	9.6*	9.7*
Tuberculosis of respiratory system (001-008)	191	121	70	3.9	3.0	7.5
Tuberculosis, other forms (010-019)	15	7	8	0.3	0.2	0.9
Syphilis and its sequelae (020-029)	111	63	48	2.2	1.6	5.1
Typhoid fever (040)	1	0	1	0.0	.....	0.1
Dysentery, all forms (045-048)	6	2	4	0.1	0.1	0.4
Diphtheria (055)	3	1	2	0.1	0.0	0.2
Meningococcal infections (057)	18	11	7	0.4	0.3	0.7
Acute poliomyelitis (080)	4	2	2	0.1	0.1	0.2
Acute infectious encephalitis (082)	15	12	3	0.3	0.3	0.3
Measles (085)	3	3	0	0.1	0.1	.....
Typhus and other rickettsial diseases (100-108)	0	0	0	.....	.....	.....
All other diseases classified as infective and parasitic (030 to 138 with exception of above causes)	176	111	65	3.6	2.8	6.9
Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (140-205)	7,719	6,710	1,009	155.9	167.1	107.8
Diabetes mellitus (260)	739	560	179	14.9	13.9	19.1
Anemias (290-293)	107	57	50	2.2	1.4	5.3
Major cardiovascular-renal disease	24,562	20,880	3,682	496.0	520.0	393.5
Cerebral vascular disease (330-334)	5,491	4,426	1,065	110.9	110.2	113.8
Rheumatic fever (400-402)	11	6	5	0.2	0.1	0.5
Diseases of the heart (410-443)	16,995	14,794	2,201	343.2	368.4	235.2
Chronic rheumatic heart disease (410-416)	495	441	54	10.0	11.0	5.8
Arteriosclerotic heart disease, coronary disease (420)	12,861	11,682	1,179	259.7	290.9	126.0
Nonrheumatic chronic endocarditis and myocardial degeneration (421, 422)	1,231	1,033	198	24.9	25.7	21.2
Hypertension with heart disease (440-443)	1,569	980	589	31.7	24.4	62.9
Other diseases of heart (430-434)	839	658	181	16.9	16.4	19.3
Hypertension without heart disease (444-447)	353	245	108	7.1	6.1	11.5
General arteriosclerosis (450)	733	640	93	14.8	15.9	9.9
Other circulatory diseases (451-468)	652	562	90	13.2	14.0	9.6
Chronic and unspecified nephritis (592-594)	327	207	120	6.6	5.2	12.8
Influenza (480-483)	180	106	74	3.6	2.6	7.9
Pneumonia (490-493)	1,460	980	480	29.5	24.4	51.3
Ulcer of stomach and duodenum (540-541)	304	275	29	6.1	6.8	3.1
Intestinal obstruction and hernia (560, 561, 570)	246	210	36	5.0	5.2	3.8
Gastritis, duodenitis, enteritis and colitis, except diarrhea of the newborn (543, 571, 572)	316	158	158	6.4	3.9	16.9
Cirrhosis of liver (581)	568	503	65	11.5	12.5	6.9
Acute nephritis and nephrosis (590, 591)	63	44	19	1.3	1.1	2.0
Complications of pregnancy, childbirth and the puerperium (640-652, 660, 670-689)	53	15	38	4.6**	1.8**	12.2**
Congenital malformations (750-759)	561	428	133	11.3	10.7	14.2
Birth injuries, postnatal asphyxia and atelectasis (760-762)	931	590	341	18.8	14.7	36.4
Infection of the newborn (763-768)	155	72	83	3.1	1.8	8.9
Other diseases peculiar to early infancy, and immaturity unqualified (769-776)	973	625	348	19.7	15.6	37.2
Symptoms, senility, and ill-defined causes (780-795)	974	574	400	19.7	14.3	42.7
All other diseases (residual)	3,246	2,566	680	65.6	63.9	72.7
Motor vehicle accidents (810-835)	1,211	960	251	24.5	23.9	26.8
All other accidents (800-802, 840-962)	1,692	1,240	452	34.2	30.9	48.3
Suicide and self-inflicted injury (963, 970-979)	667	632	35	13.5	15.7	3.7
Homicide and operations of war (964, 965, 980-999)	449	146	303	9.1	3.6	32.4
Infant mortality (deaths under one year of age)	3,432	2,004	1,428	29.7***	23.8***	45.7***

*Rate per 1,000 population **Rate per 10,000 live births ***Rate per 1,000 live births

TABLE 10A

RESIDENT DEATHS AND DEATH RATES BY CAUSE, BY RACE, FLORIDA, 1959 (FINAL FIGURES)

CAUSE OF DEATH (Numbers in parentheses refer to the International Lise of Causes of Death)	DEATHS			Rate per 100,000 Population		
	Total	White	Nonwhite	Total	White	Nonwhite
TOTAL DEATHS	44,179	35,550	8,629	9.3*	9.3*	9.6*
Tuberculosis of respiratory system (001-008)	210	153	57	4.4	4.0	6.4
Tuberculosis, other forms (010-019)	17	9	8	0.4	0.2	0.9
Syphilis and its sequelae (020-029)	91	42	49	1.9	1.1	5.5
Typhoid fever (040)	0	0	0	.....	.....	.....
Dysentery, all forms (045-048)	9	1	8	0.2	0.0	0.9
Scarlet fever and strep. sore throat (050,051)	1	1	0	0.0	0.0	.....
Diphtheria (055)	5	1	4	0.1	0.0	0.4
Whooping cough (056)	9	1	8	0.2	0.0	0.9
Meningococcal infections (057)	15	9	6	0.3	0.2	0.7
Acute poliomyelitis (080)	14	14	0	0.3	0.4	.....
Acute infectious encephalitis (082)	23	13	10	0.5	0.3	1.1
Measles (085)	11	3	8	0.2	0.1	0.9
Typhus and other rickettsial diseases (100-108)	0	0	0	.....	.....	.....
All other diseases classified as infective and parasitic (030-138) with exception of above causes	198	119	79	4.2	3.1	8.8
Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (140-205)	7,271	6,359	912	153.7	165.8	101.8
Benign and unspecified neoplasms (210-239)	116	84	32	2.5	2.2	3.6
Diabetes mellitus (260)	598	469	129	12.6	12.2	14.4
Anemias (290-293)	115	71	44	2.4	1.9	4.9
Major cardiovascular-renal disease	22,481	19,014	3,467	475.2	495.0	387.0
Cerebral vascular disease (330-334)	5,097	3,977	1,120	107.8	103.7	125.0
Rheumatic fever (400-402)	28	15	13	0.6	0.4	1.5
Diseases of the heart (410-443)	14,513	12,750	1,763	306.8	332.5	196.8
Chronic rheumatic heart disease (410-416)	448	406	42	9.5	10.6	4.7
Arteriosclerotic heart disease, coronary disease (420)	11,592	10,595	997	245.1	276.3	111.3
Nonrheumatic chronic endocarditis and myocardial degeneration (421-422)	1,039	836	203	22.0	21.8	22.7
Hypertension with heart disease (440-443)	1,434	913	521	30.3	23.8	58.1
Other diseases of heart (430-434)	844	676	168	17.8	17.6	18.7
Hypertension without heart disease (444-447)	351	232	119	7.4	6.1	13.3
General arteriosclerosis (450)	693	621	72	14.7	16.2	8.0
Other circulatory diseases (451-468)	617	530	87	13.0	13.8	9.7
Chronic and unspecified nephritis (592-594)	338	213	125	7.1	5.6	14.0
Influenza (480-483)	67	29	38	1.4	0.8	4.2
Pneumonia (490-493)	1,156	774	382	24.4	20.2	42.6
Bronchitis (500-502)	92	72	20	1.9	1.9	2.2
Ulcer of stomach and duodenum (540, 541)	278	236	42	5.9	6.2	4.7
Appendicitis (550-553)	52	34	18	1.1	0.9	2.0
Intestinal obstruction and hernia (560, 561, 570)	241	192	49	5.1	5.0	5.5
Gastritis, duodenitis, enteritis and colitis except diarrhea of the newborn (543, 571, 572)	335	175	160	7.1	4.6	17.9
Cirrhosis of liver (581)	534	470	64	11.3	12.3	7.1
Acute nephritis (590-591)	65	37	28	1.4	1.0	3.1
Hyperplasia of prostate (610)	148	122	26	2.1	3.2	2.9
Complications of pregnancy, childbirth and the puerperium (640-652, 660, 670-689)	57	19	38	5.1**	2.3**	12.3**
Congenital malformations (750-759)	606	459	147	12.8	12.0	16.4
Birth injuries, postnatal asphyxia and atelectasis (760-762)	923	609	314	19.5	15.9	35.0
Infection of the newborn (763-768)	187	88	99	4.0	2.3	11.0
Other diseases peculiar to early infancy and immaturity unqualified (769-776)	1,001	597	404	21.2	15.6	45.1
Symptoms, senility, and ill-defined causes (780-795)	897	554	343	19.0	14.4	38.3
All other diseases (residual)	2,562	1,990	572	54.2	51.9	63.8
Motor vehicle accidents (810-835)	1,112	894	218	23.5	23.3	24.3
All other accidents (800-802, 840-962)	1,599	1,134	465	33.8	29.6	51.9
Suicide and self-inflicted injury (963, 970-979)	572	552	20	12.1	14.4	2.2
Homicide, and operations of war (964, 965, 980-999)	511	150	361	10.8	3.9	40.3
Infant mortality (deaths under one year of age)	3,558	2,058	1,500	31.0***	25.1***	48.7***

*Rate per 1,000 population **Rate per 10,000 live births ***Rate per 1,000 live births

TABLE 11

CENSUS POPULATION, 1960, AND PRELIMINARY TOTALS OF BIRTHS, DEATHS, AND INFANT DEATHS, BY RACE, BY COUNTY, FLORIDA, 1960

COUNTY	Census Population 1960	BIRTHS			DEATHS			INFANT DEATHS		
		Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
STATE	4,951,560	115,610	84,377	31,233	47,719	38,664	9,055	3,432	2,004	1,428
Alachua	74,074	2,102	1,368	734	572	350	222	50	24	26
Baker	7,363	198	132	66	72	62	10	6	4	2
Bay	67,131	2,113	1,718	395	466	376	90	64	43	21
Bradford	12,446	298	210	88	123	90	33	13	5	8
Brevard	111,435	3,428	2,893	535	670	556	114	93	66	27
Broward	333,946	7,489	5,132	2,357	2,947	2,467	480	251	139	112
Calhoun	7,422	164	136	28	66	51	15	6	4	2
Charlotte	12,594	211	195	16	155	148	7	6	6	0
Citrus	9,268	144	95	49	137	109	28	7	1	6
Clay	19,535	486	414	72	143	116	27	15	11	4
Collier	15,753	379	291	88	122	91	31	13	6	7
Columbia	20,077	475	287	188	214	139	75	19	10	9
Dade	935,047	19,685	14,350	5,335	8,297	7,227	1,070	541	328	213
DeSoto	11,683	235	158	77	107	75	32	10	5	5
Dixie	4,479	144	120	24	52	36	16	11	5	6
Duval	455,411	12,538	9,057	3,481	3,910	2,635	1,275	391	226	165
Escambia	173,829	5,423	3,987	1,436	1,234	887	347	162	99	63
Flagler	4,566	125	57	68	45	26	19	5	2	3
Franklin	6,576	171	136	35	78	48	30	1	1	0
Gadsden	41,989	1,175	272	903	350	111	239	78	9	69
Gilchrist	2,868	68	56	12	33	25	8	2	1	1
Glades	2,950	68	45	23	22	11	11	4	2	2
Gulf	9,937	273	191	82	81	58	23	8	6	2
Hamilton	7,705	197	76	121	80	48	32	7	4	3
Hardee	12,370	272	223	49	139	123	16	13	8	5
Hendry	8,119	191	116	75	72	44	28	6	2	4
Hernando	11,205	304	203	101	134	106	28	14	6	8
Highlands	21,338	560	376	184	259	202	57	26	14	12
Hillsborough	397,788	9,491	7,663	1,828	3,951	3,248	703	275	184	91
Holmes	10,844	197	186	11	118	113	5	5	5	0
Indian River	25,309	628	406	222	262	223	39	15	8	7
Jackson	36,208	814	487	327	315	195	120	25	11	14
Jefferson	9,543	266	74	192	117	35	82	12	2	10
Lafayette	2,889	51	39	12	37	31	6	4	3	1
Lake	57,383	1,303	917	386	687	577	110	47	26	21
Lee	54,539	1,147	843	304	582	489	93	45	29	16
Leon	74,225	1,932	1,134	798	511	269	242	55	21	34
Levy	10,364	235	106	129	121	73	48	9	3	6
Liberty	3,138	74	56	18	47	39	8	3	1	2
Madison	14,154	326	132	194	142	74	68	7	3	4
Manatee	69,168	1,154	827	327	949	842	107	26	16	10
Marion	51,616	1,164	593	571	527	327	200	28	15	13
Martin	16,932	392	252	140	181	146	35	11	7	4
Monroe	47,921	1,294	1,151	143	347	288	59	39	33	6
Nassau	17,189	437	312	125	164	113	51	14	8	6
Okaloosa	61,175	2,185	1,991	194	272	238	34	48	40	8
Okeechobee	6,424	172	141	31	54	39	15	6	4	2
Orange	263,540	6,995	5,586	1,409	2,153	1,812	341	159	106	53
Osceola	19,029	368	300	68	349	327	22	15	10	5
Palm Beach	228,106	4,813	3,162	1,651	2,305	1,770	535	149	68	81
Pasco	36,785	641	530	111	497	453	44	20	11	9
Pinellas	374,665	5,775	4,565	1,210	5,693	5,347	346	161	96	65
Polk	195,139	4,543	3,340	1,203	1,752	1,421	331	130	84	46
Putnam	32,212	888	533	355	333	223	110	21	7	14
St. Johns	30,034	656	426	230	347	235	112	25	9	16
St. Lucie	39,294	926	501	425	357	256	101	25	12	13
Santa Rosa	29,547	976	894	82	214	184	30	26	20	6
Sarasota	76,895	1,376	1,090	286	870	783	87	30	18	12
Seminole	54,947	1,478	1,055	423	454	308	146	45	27	18
Sumter	11,869	267	154	113	129	92	37	7	4	3
Suwannee	14,961	329	220	109	173	126	47	11	6	5
Taylor	13,168	298	221	77	134	79	55	15	9	6
Union	6,043	98	66	32	53	34	19	2	1	1
Volusia	125,319	2,347	1,660	687	1,609	1,377	232	68	42	26
Wakulla	5,257	114	65	49	43	30	13	2	0	2
Walton	15,576	296	243	53	170	132	38	15	12	3
Washington	11,249	248	162	86	120	99	21	10	6	4

TABLE 11A

ESTIMATED POPULATION WITH RESIDENT BIRTH AND DEATH RATES PER 1,000 POPULATION AND RESIDENT INFANT DEATH RATES PER 1,000 LIVE BIRTHS, BY RACE, BY COUNTY, 1959 (FINAL FIGURES)

COUNTY	Population Estimate 1959	BIRTH RATE			DEATH RATE			INFANT DEATH RATE		
		Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
STATE	4,730,300	23.8	21.4	34.4	9.3	9.3	9.6	31.6	25.1	48.7
Alachua	72,200	28.2	24.8	38.8	7.5	6.2	11.5	33.0	27.2	44.6
Baker	7,300	26.3	25.3	29.4	7.5	6.7	10.0	20.8	14.4	37.7*
Bay	64,500	34.7	33.4	41.6	6.4	6.1	7.6	27.9	22.7	51.9
Bradford	12,200	17.1	15.5	21.9	10.5	10.9	9.4	36.8	35.0	40.4*
Brevard	97,600	31.9	30.2	44.6	6.1	5.7	9.2	25.7	22.6	42.0
Broward	311,400	22.1	18.2	38.8	8.2	8.3	8.1	31.2	19.9	53.4
Calhoun	7,400	23.8	21.7	35.5	10.4	10.3	10.9	39.8	29.2	76.9*
Charlotte	10,500	17.7	17.6	18.9	11.6	12.2	5.6	32.3	29.6	58.8*
Citrus	9,000	17.3	15.0	26.7	11.0	11.4	9.4	32.1	27.8	41.7*
Clay	19,100	30.6	29.6	37.2	7.1	6.6	10.4	30.8	32.6	21.5*
Collier	14,700	23.7	25.2	19.1	8.7	8.2	10.3	43.0	31.9	89.6*
Columbia	19,500	26.7	24.7	30.8	11.4	11.3	11.7	38.5	49.5	20.3
Dade	902,700	21.3	18.5	36.8	8.9	9.1	7.5	28.8	24.1	42.0
DeSoto	9,600	24.9	21.6	32.9	11.8	11.2	13.2	46.0	13.6	97.8*
Dixie	4,500	30.0	26.1	70.0	7.1	6.3	15.0	22.2	18.7	35.7*
Duval	442,200	28.1	26.2	34.3	8.3	7.2	12.0	33.4	26.2	51.4
Escambia	170,700	31.5	29.8	37.4	6.9	6.0	9.8	33.5	25.6	55.2
Flagler	4,500	30.4	22.3	46.7	10.9	11.0	10.7	29.2*	29.9*	28.6*
Franklin	6,300	27.8	27.8	27.7	13.0	11.6	18.5	17.1	21.6	0.0
Gadsden	32,800	33.9	23.6	39.9	10.7	9.8	11.2	60.2	24.7	72.3
Gilchrist	3,000	21.3	18.5	40.0	5.0	5.0	5.0	0.0	0.0	0.0
Glades	2,800	21.4	26.0	16.2	10.4	9.3	11.5	50.0*	0.0	142.9*
Gulf	9,500	27.8	26.3	32.1	6.7	5.2	11.2	26.5	21.4	38.0*
Hamilton	7,900	28.4	23.9	33.2	12.3	13.2	11.3	40.2	40.8*	39.7
Hardee	12,600	22.6	21.1	42.2	8.4	8.7	4.4	17.5	16.2	26.3*
Hendry	7,700	28.8	25.3	36.7	9.9	8.5	12.9	54.1	37.3	79.5*
Hernando	10,300	28.3	23.2	45.7	10.2	9.2	13.5	30.9	21.5	47.6
Highlands	20,400	26.2	23.6	33.0	11.3	12.4	8.4	71.2	63.0	86.5
Hillsborough	385,100	24.3	23.1	31.0	9.7	9.5	10.6	29.8	26.5	43.3
Holmes	10,800	19.7	19.3	28.0	10.4	10.2	14.0	14.1	15.1	0.0
Indian River	23,400	24.8	20.1	41.3	11.2	11.3	10.8	46.5	30.1	74.4
Jackson	35,900	22.8	20.2	28.6	9.2	8.2	11.5	28.2	20.0	41.0
Jefferson	9,600	28.9	21.3	33.8	11.4	11.8	11.0	54.2	12.3*	71.4
Lafayette	2,900	17.6	14.8	55.0	7.9	7.4	15.0	19.6*	25.0*	0.0
Lake	54,700	21.6	18.6	34.3	11.6	11.9	10.4	37.2	38.9	33.3
Lee	50,000	23.6	20.9	36.2	9.1	8.8	10.4	30.5	19.9	58.3
Leon	72,300	26.3	24.4	30.0	6.7	5.4	9.1	25.2	18.2	36.0
Levy	10,300	20.3	15.3	30.9	10.6	10.1	11.5	47.8	37.4	58.8
Liberty	3,100	24.5	21.5	40.0	11.9	11.2	16.0	13.2*	0.0	50.0*
Madison	14,100	27.7	23.0	33.2	8.9	8.7	9.2	40.9	45.7	37.0
Manatee	65,200	17.0	14.2	29.3	13.0	13.6	10.3	45.2	39.8	56.8
Marion	50,200	24.9	20.1	34.1	10.4	9.9	11.5	28.8	25.6	32.4
Martin	15,100	24.7	19.3	42.6	11.8	11.6	12.6	48.3	49.1	47.0
Monroe	44,600	31.4	31.4	31.1	6.8	6.1	12.1	26.4	29.5	0.0
Nassau	16,600	28.3	27.3	30.9	8.3	6.7	12.7	42.6	39.4	50.4
Okaloosa	59,400	31.9	31.2	40.2	4.4	4.2	7.4	31.7	29.6	53.3
Okeechobee	5,900	26.4	27.1	23.6	8.8	8.3	10.9	44.9	38.5	76.9*
Orange	248,900	26.3	24.7	35.3	8.0	8.0	7.6	24.3	21.5	35.0
Osceola	17,500	21.4	19.6	37.6	15.3	15.8	10.0	32.1	25.8	62.5*
Palm Beach	216,500	22.1	19.5	29.7	9.6	10.2	8.0	34.9	23.3	56.7
Pasco	34,900	18.2	16.6	31.6	11.5	11.8	8.9	33.0	30.8	42.7
Pinellas	347,900	16.2	14.1	34.0	14.7	15.4	8.4	28.6	23.4	47.7
Polk	189,900	22.7	20.5	32.1	8.6	8.5	8.9	34.3	28.6	49.6
Putnam	31,000	28.0	25.2	34.0	10.4	9.8	11.6	32.2	20.7	50.4
St. Johns	28,700	22.1	19.1	28.6	11.9	12.3	11.0	42.7	13.3	85.6
St. Lucie	36,900	26.5	18.0	48.0	9.6	8.7	11.8	46.0	25.8	65.5
Santa Rosa	28,000	33.5	32.8	43.2	5.6	5.2	11.1	19.2	18.7	24.4*
Sarasota	72,200	17.3	16.0	27.0	11.3	11.6	9.2	32.1	25.7	59.6
Seminole	50,300	27.6	25.4	33.9	8.5	7.4	11.9	31.0	26.6	40.2
Sumter	11,700	24.3	18.4	40.6	10.9	10.8	11.3	42.3	25.3	63.5
Suwannee	15,100	21.6	18.7	28.8	11.1	10.2	13.3	46.0	14.9	96.8
Taylor	12,800	28.1	26.6	33.7	10.3	8.8	15.9	36.1	29.7	54.9*
Union	4,100	22.7	27.6	15.0	11.0	12.0	9.4	10.8*	0.0	41.7*
Volusia	118,900	20.0	17.1	31.6	12.7	13.3	10.3	29.5	21.3	47.7
Wakulla	5,300	19.6	15.4	29.4	7.7	7.3	8.8	19.2	0.0	42.6*
Walton	15,400	20.5	20.2	21.8	9.9	9.6	11.8	34.9	41.2	0.0
Washington	11,300	19.2	16.3	32.5	9.4	9.5	9.0	32.3	26.3	46.2*

*Based on less than 100 live births, which limits the significance of the rate.

TABLE 12

PRELIMINARY TOTALS OF RESIDENT DEATHS FROM CERTAIN CAUSES, BY COUNTY, FLORIDA, 1960

COUNTIES	Maternal Deaths	Tuberculosis	Syphilis	Dysentery (All Forms)	Acute Poliomyelitis	Malignant Neoplasms (Cancer)	Diabetes	Anemias	Influenza & Pneumonia	Cardio-Vascular-Renal Diseases				Motor Vehicle Accidents	Other Accidents
										*Cerebral Vascular Disease	Heart Disease	Chronic Nephritis	All Other C.-V.R. Disease		
STATE	53	206	111	6	4	7,719	739	107	1,640	5,491	16,995	327	1,749	1,211	1,692
Alachua	1	2	1	0	0	90	7	2	35	86	151	3	24	20	24
Baker	1	0	0	0	0	14	0	0	3	13	20	0	2	2	2
Bay	0	3	0	1	0	67	3	0	14	40	132	2	13	23	27
Bradford	0	0	0	0	0	7	2	0	7	22	42	0	4	6	8
Brevard	1	1	0	0	1	127	7	4	23	74	191	4	33	16	26
Broward	5	13	7	0	0	534	41	3	93	293	1,055	14	87	67	115
Calhoun	0	1	0	0	0	4	1	0	2	14	22	1	0	1	8
Charlotte	0	0	0	0	0	22	5	1	3	24	60	0	5	2	8
Citrus	0	0	0	0	0	21	0	0	6	22	59	0	9	1	4
Clay	0	0	0	0	0	22	2	0	6	22	37	1	6	4	3
Collier	0	0	0	0	0	16	5	2	4	10	39	0	2	4	6
Columbia	1	0	1	0	0	18	4	0	13	40	65	1	12	4	5
Dade	9	43	21	2	1	1,495	140	18	239	747	3,017	43	279	182	270
DeSoto	0	0	1	0	0	15	0	0	5	14	33	7	4	3	3
Dixie	0	1	0	0	0	5	0	0	2	8	12	2	0	7	1
Duval	2	30	16	1	0	594	64	12	167	443	1,222	32	121	123	159
Escambia	0	6	3	0	0	151	12	2	59	131	453	4	27	38	59
Flagler	0	0	0	0	0	4	3	0	1	4	9	3	2	3	4
Franklin	0	0	0	0	0	16	3	0	1	10	21	0	4	0	4
Gadsden	2	1	1	0	0	27	5	1	17	44	110	3	11	8	25
Gilchrist	0	0	0	0	0	3	1	0	2	4	12	1	0	1	3
Glades	0	0	0	0	0	2	0	0	1	3	1	0	0	1	2
Gulf	0	0	0	0	0	13	0	0	2	5	32	2	1	3	5
Hamilton	0	0	0	0	0	8	0	0	5	8	31	0	3	5	1
Hardee	2	1	0	0	0	21	2	1	6	14	48	0	7	4	5
Hendry	0	0	0	0	0	6	3	0	5	5	23	0	3	9	2
Hernando	1	0	0	0	0	21	0	0	6	18	37	2	1	6	4
Highlands	1	1	0	0	0	37	5	2	15	21	92	3	14	11	8
Hillsborough	5	23	8	0	0	636	73	7	103	470	1,223	30	169	99	107
Holmes	2	0	1	0	0	19	2	0	5	21	38	1	7	2	5
Indian River	0	1	0	0	0	41	3	0	7	24	109	1	7	11	7
Jackson	1	1	0	0	0	33	4	2	17	51	105	5	17	8	17
Jefferson	1	1	0	0	0	10	3	1	10	17	38	1	3	1	4
Lafayette	0	0	0	0	0	6	1	0	2	3	13	0	5	0	1
Lake	1	2	4	0	0	104	17	1	25	63	270	7	32	17	22
Lee	0	1	0	0	0	85	12	2	18	57	175	5	32	15	33
Leon	0	3	0	0	1	64	6	1	23	67	142	8	12	18	28
Levy	0	0	0	0	0	18	1	0	8	14	42	0	7	2	9
Liberty	1	0	0	0	0	6	1	0	2	3	19	0	1	6	2
Madison	1	1	0	0	0	18	4	0	4	15	58	1	6	0	3
Manatee	0	5	3	0	0	142	13	1	48	117	396	11	33	20	12
Marion	0	2	1	0	0	79	7	2	14	82	188	4	26	19	12
Martin	0	0	0	0	0	32	2	2	5	22	56	0	6	5	10
Monroe	0	3	0	0	0	56	8	1	9	36	104	1	12	17	13
Nassau	2	0	0	0	0	15	2	0	4	25	57	3	3	6	11
Okaloosa	0	2	0	0	0	41	2	0	12	26	74	2	10	14	15
Okeechobee	0	0	0	0	0	8	1	0	3	13	14	0	0	1	4
Orange	2	8	2	0	0	334	22	4	83	247	808	15	71	50	90
Osceola	0	0	3	0	0	46	5	1	12	54	117	2	19	10	17
Palm Beach	2	10	7	0	0	399	48	4	90	280	828	9	80	74	83
Pasco	1	0	3	0	0	82	10	2	14	61	200	4	16	12	20
Pinellas	2	12	8	0	0	1,050	77	11	131	785	2,400	16	242	86	105
Polk	2	8	4	1	1	270	22	3	63	212	631	22	61	47	67
Putnam	0	4	1	0	0	49	3	0	14	29	125	19	13	7	17
St. Johns	0	2	0	1	0	37	7	1	16	47	122	3	14	6	14
St. Lucie	1	1	2	0	0	53	5	0	13	55	118	2	15	9	10
Santa Rosa	0	0	0	0	0	20	6	0	10	32	71	1	8	10	13
Sarasota	1	1	2	0	0	175	10	5	15	84	360	4	38	12	22
Seminole	0	1	4	0	0	63	6	4	25	33	167	2	8	20	26
Sumter	0	1	0	0	0	14	0	0	1	11	46	3	3	6	3
Suwannee	0	1	1	0	0	22	0	0	9	34	58	1	9	3	10
Taylor	1	4	0	0	0	24	4	0	9	22	34	1	5	5	4
Union	0	0	0	0	0	4	2	0	0	9	23	0	1	1	4
Volusia	1	5	5	0	0	271	31	4	53	172	633	12	73	35	56
Wakulla	0	0	1	0	0	3	0	0	2	10	10	0	1	0	6
Walton	0	0	0	0	0	16	3	0	16	24	56	2	7	0	14
Washington	0	0	0	0	0	14	1	0	3	25	41	1	3	3	5

*Includes all vascular lesions affecting the central nervous system.

TABLE 13

MARRIAGES BY RACE, DIVORCES, AND ANNULMENTS FOR FLORIDA, AND EACH COUNTY, 1960

COUNTY	MARRIAGES			DIVORCES	ANNULMENTS
	Total	White	Nonwhite		
STATE	39,315	32,479	6,836	19,326	185
Alachua	458	318	140	168	0
Baker	75	60	15	94	1
Bay	477	390	87	269	3
Bradford	83	66	17	65	1
Brevard	791	682	109	909	8
Broward	2,611	2,126	485	1,032	9
Calhoun	37	34	3	61	0
Charlotte	131	118	13	66	0
Citrus	103	89	14	75	0
Clay	146	139	7	88	1
Collier	208	181	27	37	0
Columbia	154	107	47	70	0
Dade	8,160	7,049	1,111	4,275	71
DeSoto	146	121	25	40	0
Dixie	40	33	7	8	0
Duval	3,001	2,324	677	1,694	6
Escambia	1,427	1,124	303	804	14
Flagler	58	40	18	172	3
Franklin	61	48	13	23	0
Gadsden	191	88	103	66	0
Gilchrist	55	44	11	5	0
Glades	47	33	14	10	0
Gulf	72	60	12	44	0
Hamilton	49	30	19	23	0
Hardee	161	146	15	246	2
Hendry	125	98	27	55	0
Hernando	156	133	23	39	0
Highlands	200	164	36	99	0
Hillsborough	3,466	2,951	515	1,623	10
Holmes	114	107	7	38	0
Indian River	216	173	43	53	1
Jackson	168	135	33	83	1
Jefferson	53	21	32	13	0
Lafayette	26	24	2	3	0
Lake	479	359	120	453	1
Lee	450	384	66	169	2
Leon	472	321	151	223	0
Levy	96	67	29	31	0
Liberty	12	11	1	5	0
Madison	98	70	28	28	0
Manatee	566	464	102	133	0
Marion	451	307	144	119	1
Martin	148	118	30	49	0
Monroe	428	380	48	235	1
Nassau	79	69	10	35	0
Okaloosa	340	322	18	250	2
Okeechobee	99	88	11	26	0
Orange	2,025	1,701	324	325	5
Osceola	230	190	40	30	0
Palm Beach	1,575	1,214	361	753	6
Pasco	382	348	34	144	2
Pinellas	2,766	2,465	301	1,154	6
Polk	1,761	1,454	307	703	11
Putnam	236	170	66	389	3
St. Johns	231	189	42	239	1
St. Lucie	314	227	87	150	2
Santa Rosa	237	226	11	79	1
Sarasota	661	579	82	275	3
Seminole	373	248	125	210	1
Sumter	149	119	30	104	2
Suwannee	129	93	36	57	1
Taylor	114	93	21	27	0
Union	34	28	6	24	0
Volusia	918	761	157	483	3
Wakulla	40	30	10	0	0
Walton	91	72	19	51	0
Washington	65	56	9	23	0

TABLE 14

FLORIDA STATE BOARD OF HEALTH VITAL STATISTICS SCOREBOARD BASED ON PROMPTNESS AND COMPLETENESS OF CERTIFICATES FILED IN 1960

COUNTY	Rank	Percent of Certificates Filed on Time		Percent of Complete Certificates		Percent of Monthly Reports Submitted on Time	Total Score (Maximum = 500)	Change from 1959 Total Score
		Births	Deaths	Births	Deaths			
STATE	.....	94.2	97.5	99.6	99.4	93.0	483.7	− 0.9
Wakulla	1	100.0	100.0	100.0	100.0	100.0	500.0	+ 7.7
Duval	2	99.9	99.9	99.9	99.7	100.0	499.4	0.0
Dade	3	99.1	100.0	99.9	99.8	100.0	498.8	+ 1.7
Hillsborough	4	98.8	99.8	99.9	99.8	100.0	498.3	+ 0.6
Orange	5	99.2	99.3	99.9	99.7	100.0	498.1	+ 1.5
Citrus	6	100.0	100.0	98.4	99.2	100.0	497.6	+ 1.1
Jefferson	7	100.0	100.0	98.7	98.9	100.0	497.6	− 0.8
Sarasota	8	99.5	100.0	99.2	98.7	100.0	497.4	+ 0.9
Broward	9	98.1	99.9	99.6	99.6	100.0	497.2	+ 1.1
Martin	10	99.1	98.1	100.0	98.8	100.0	496.0	+ 1.5
Suwannee	11	99.0	97.1	99.7	100.0	100.0	495.8	+ 1.3
Polk	12	98.0	98.5	99.7	99.3	100.0	495.5	+ 5.2
Volusia	13	98.2	98.5	99.3	99.5	100.0	495.5	− 0.5
St. Lucie	14	99.1	98.1	99.3	98.6	100.0	495.1	+ 1.6
Indian River	15	95.2	98.4	99.5	99.6	100.0	492.7	+16.0
Escambia	16	93.3	99.0	99.9	99.8	100.0	492.0	+ 0.4
Seminole	17	98.1	96.8	98.8	98.1	100.0	491.8	− 2.2
Franklin	18	96.0	96.0	99.4	100.0	100.0	491.4	+ 0.3
Hernando	19	97.3	99.3	99.2	94.2	100.0	490.0	− 8.9
Palm Beach	20	91.5	98.2	99.7	99.6	100.0	489.0	+ 9.1
Baker	21	99.4	100.0	98.9	98.6	91.7	488.6	− 9.5
Washington	22	97.2	89.6	100.0	99.1	100.0	485.9	− 2.8
Taylor	23	91.9	97.5	99.3	96.7	100.0	485.4	+ 7.9
Gulf	24	96.1	93.0	97.7	98.6	100.0	485.4	+ 0.9
Alachua	25	91.2	94.6	99.8	98.7	100.0	484.3	− 1.4
Pinellas	26	85.0	99.2	99.7	99.8	100.0	483.7	− 4.4
Holmes	27	98.8	96.7	96.3	98.9	91.7	482.4	− 2.9
Putnam	28	93.5	89.9	99.4	98.6	100.0	481.4	− 0.2
Levy	29	94.7	89.7	99.2	97.4	100.0	481.0	+ 0.1
Manatee	30	93.9	98.4	97.6	99.2	91.7	480.8	− 3.1
Leon	31	85.3	93.3	99.5	97.8	100.0	475.9	+21.6
Glades	32	100.0	100.0	100.0	100.0	75.0	475.0	−25.0
Gadsden	33	81.2	94.3	98.9	98.7	100.0	473.1	− 3.0
Highlands	34	83.0	90.9	99.7	98.9	100.0	472.5	− 1.0
Monroe	35	83.0	89.9	98.7	99.1	100.0	470.7	− 5.3
Lee	36	79.9	92.7	99.1	98.6	100.0	470.3	+46.6
Madison	37	95.5	98.3	99.2	99.1	75.0	467.1	−13.5
Gilchrist	38	84.6	82.4	100.0	100.0	100.0	467.0	+32.9
Hendry	39	84.5	93.9	99.3	97.6	91.7	467.0	+20.5
DeSoto	40	95.3	97.2	99.6	99.6	75.0	466.7	−11.3
Columbia	41	81.6	93.3	99.6	99.6	91.7	465.8	+49.5
Clay	42	84.4	93.8	98.2	97.5	91.7	465.6	− 4.1
Flagler	43	97.9	97.4	100.0	94.7	75.0	465.0	−13.5
Osceola	44	86.1	98.2	98.3	98.2	83.3	464.1	−12.8
Charlotte	45	79.5	96.6	99.4	96.6	91.7	463.8	+ 7.5
Marion	46	74.4	98.3	98.7	99.2	91.7	462.3	+35.3
Dixie	47	81.4	80.0	100.0	100.0	100.0	461.4	+17.4
St. Johns	48	99.5	97.4	99.5	98.3	66.7	461.4	−24.9
Lake	49	84.5	78.2	99.3	98.3	100.0	460.3	− 4.3
Okaloosa	50	85.1	76.6	99.1	97.0	100.0	457.8	− 7.9
Santa Rosa	51	84.7	82.6	99.5	97.9	91.7	456.4	−12.3
Hamilton	52	85.6	77.0	98.3	94.6	100.0	455.5	−21.1
Hardee	53	94.4	100.0	95.3	99.1	66.7	455.5	−34.3
Walton	54	90.6	80.3	100.0	100.0	83.3	454.2	−25.9
Bay	55	77.8	77.9	99.5	98.3	100.0	453.5	− 1.9
Pasco	56	86.6	86.4	97.6	98.8	83.3	452.7	+18.0
Brevard	57	89.5	96.8	99.3	98.4	66.7	450.7	−27.8
Calhoun	58	75.3	86.3	97.8	98.0	91.7	449.1	−36.3
Jackson	59	82.7	75.3	99.3	99.2	91.7	448.2	− 3.0
Okeechobee	60	70.9	81.4	100.0	94.9	100.0	447.2	−21.7
Union	61	75.4	90.9	94.7	100.0	83.3	444.3	−17.6
Sumter	62	71.3	77.0	95.9	97.7	100.0	441.9	+ 1.3
Nassau	63	51.1	87.1	99.7	94.4	100.0	436.3	−18.1
Liberty	64	100.0	61.9	71.4	100.0	100.0	433.3	+48.3
Lafayette	65	71.4	89.5	78.6	100.0	91.7	431.2	−18.2
Bradford	66	98.3	96.3	97.7	100.0	33.3	425.6	−39.8
Collier	67	31.1	85.3	99.4	96.9	66.7	379.4	−62.0

BUREAU OF MATERNAL AND CHILD HEALTH

L. L. PARKS, M.D., M.P.H., Director

E. L. FLEMMING, Ed.D., Assistant Director

STAFF

On July 1 the director of the Bureau of Maternal and Child Health exchanged positions with the director of the Bureau of Special Health Services. There were no other staff changes during the year except that the pediatric consultant went on educational leave in September. He is expected to return at the end of the school year in June 1961.

The staff of the bureau remains small; however, its responsibilities are of a general consultant nature to those programs concerned with the health of mothers and children. It also provides an indirect type of service through the county health departments by the allocation of funds provided by the U. S. Children's Bureau for this program.

In developing its long range plan, the staff had an opportunity to review the programs of the bureau with outside consultants, to inventory and evaluate the services and programs in operation and make plans for future programs to meet the current and anticipated problems. It was thought that the bureau has 4 major areas which need special promotion, namely: further reduction of infant and maternal mortality rates, especially the premature problem; improvement of school health services; development of the program on the problem of mental retardation, and the reduction of infant and maternal mortality through family planning. The many other programs of an educational nature and services should not be de-emphasized, and are being carried on in a reasonably satisfactory manner.

The former director of the bureau and the assistant director had the opportunity of participating in and contributing to the 1960 White House Conference on Children and Youth. Recommendations from this Conference may be helpful in developing our program. The present director of the bureau had the opportunity of attending the National Conference on Day Care for Children. Statewide regulations for day care centers are being prepared and will be presented to the next State Legislature by the agencies concerned with this problem. Many of the day care centers long have been overcrowded and are in need of some supervision for health and safety reasons.

MATERNAL HEALTH

The provisional maternal mortality rate of 4.6 per 10,000 live births for 1960 shows that our program in this field is still making progress. Table 15 gives the resident maternal death rates since 1935 at 5 year intervals.

TABLE 15
RESIDENT MATERNAL DEATH RATE (PER 10,000 LIVE BIRTHS) BY RACE, FLORIDA 1935-1960: 5-YEAR INTERVALS

Year	Total		White		Nonwhite	
	Deaths	Rate	Deaths	Rate	Deaths	Rate
1935	242	86	143	73	99	117
1940	215	64	118	50	97	98
1945	142	29	66	18	76	60
1950	83	13	34	7	49	26
1955	57	6.4	24	4	33	13
1960*	53	4.6	15	2	38	12

*Provisional

Efforts to reduce this rate seem to depend upon the development of more knowledge of the causes of maternal mortality or greater emphasis on the application of our present knowledge. In some states attention has been called to the fact that expectant mothers are not seeking medical care as readily during their pregnancy as they once did. Perhaps a thorough study of this should be made to determine if this is true in Florida for the data available suggest some discrepancies. Of the patients admitted to medical services through the county health department prenatal clinics, the number of visits per case has averaged from 2.8 to 2.9 visits for the past 7 years. It is noted that of all births in Florida, the percentage of expectant mothers attending the health deparment prenatal clinics has moved from 7.3 per cent in 1954 to 9.1 per cent in 1959 and 11.3 per cent in 1960. The remaining expectant mothers are presumed to be under the care of private physicians. Midwives have been required for some years to accompany their patients to the health department clinics if they attend the case at delivery. The health department maternity clinics are directed by private physicians or the county health director who is a physician.

A survey of the number of maternal and child health clinics in operation in the state was made this fall and it was found that 218 maternity clinics are operating in 56 counties. These clinics are primarily for the indigent. This means that it is possible for almost every mother in Florida to secure adequate prenatal care. If she does not have a private physician, she may then attend a health department clinic which is held in most counties of the state. Delivery is attended by a private physician or midwife. Hospitalization under the *Hospital Services for the Indigent Program* is available in some counties, or by special arrangement at a low cost payment with local hospitals, but hospitalization plans are not readily available in many counties.

It is noted that the number of mothers securing a postpartum examination continues to be low. More emphasis is needed in this service. During 1959 there were 3870 mothers, or only 31 per cent of these

mothers attending the health department prenatal clinics, who returned for a postpartum visit. In 1960 there were 4398 postpartum visits, or 33.5 per cent. This examination is important to the mother's health and especially important in the early diagnosis of cancer, as well as for instruction in future family planning.

In 1959 physicians attended 99.2 per cent of white deliveries and 81.6 per cent of nonwhite deliveries. Deliveries were in hospitals in 98.8 per cent of white births and 79.7 per cent of nonwhite births. There were 53 maternal deaths for the year as compared with 57 for the previous year; however, the figures for 1960 are provisional.

The Maternal Welfare Committee of the Florida Medical Association has continued to study ways and means of lowering the maternal mortality rate. Some maternal deaths could be classified as preventable if proper care had been more readily available.

There were 228 midwives licensed in Florida in 1960 by the State Board of Health. Midwives delivered 6010 babies during the year. They received supervision and training by the county health departments. The number of midwives is decreasing annually; in 1950 there were 422 licensed midwives and 336 in 1955. There is less need for midwives as more physicians are now practicing in rural areas and there are more hospitals in all parts of the state. Young girls seem to be less interested in going into this type of service; however, there is still a need for the midwife in some areas of the state.

On the question as to what the health departments should do in the field of planned parenthood, there has been some favorable reaction and at the same time some are not interested in promoting such a program. In view of the medical problems arising from poor family planning, it is believed that some attention should be given to this type of service by the county health departments. It has been the general policy to leave it to the discretion of the respective county health officer as to whether or not he wishes to promote such a program in his county. Some of the county health departments are already carrying on this service when it is requested, and it is believed this is the way that it should be done.

INFANT HEALTH

In 1960 there were 115,610 births, or a rate of 23.3 per thousand population. In the same period 3432 infant deaths were recorded and the rate was 29.7 per thousand live births.

Prematurity is one of the major causes of death in infants. However, much attention and effort is being devoted to this part of the program. Improved prenatal care will help the mother to carry her baby to full term; but if the baby is premature, efforts are being made to give the baby every possible chance to survive.

A survey made in the fall showed that more than 500 incubators are available to help care for premature infants in 53 counties. These

incubators have been provided by the hospital or are on loan to them by the health departments and are readily accessible. The August 1960 issue of the American Hospital Association Guide lists 90 hospitals or about half of the hospitals in the state, that operate premature nurseries, or provide services for the premature. The number of births for the year in these hospitals with premature nurseries varies from 75 to 6065.

County health department nurses are available to help provide supervision of the premature baby upon its discharge from the hospital, and better still to investigate the home situation before the baby arrives from the hospital. Efforts are being made to promote better premature centers in the state and to provide further for the training of personnel working in the centers (See special report on the Premature Demonstration Center).

Well-baby clinics are in operation in many centers in the state, (a total of 237 clinics in 54 counties). These clinics are staffed by county health department personnel and in many instances by private physicians. Services are provided to encourage proper care of the baby, such as in nutrition, immunizations and the proper growth and development of the child so he will be normal mentally and physicially. These clinics are intended for those persons unable to secure such services through private means.

There has been a gradual decline in the infant mortality rate as noted in Table 16 in both the white and nonwhite population.

TABLE 16

RESIDENT INFANT DEATHS (PER 1000 LIVE BIRTHS) BY RACE, FLORIDA 1935-1960: 5-YEAR INTERVALS

Year	Total		White		Nonwhite	
	Deaths	Rate	Deaths	Rate	Deaths	Rate
1935	1728	61.6	983	50.2	745	88.0
1940	1812	53.8	1052	44.2	760	76.8
1945	2092	42.8	1315	36.3	777	61.6
1950	2078	32.3	1225	26.8	853	45.7
1955	2649	29.7	1476	23.0	1173	46.8
1960*	3432	29.7	2004	23.8	1428	45.7

*Provisional

PRESCHOOL HEALTH

The preschool, or 1-5 age group, has not yet developed immunity to the contagious diseases and has its share of the other causes of death that face all ages, such as accidents, chronic diseases, as well as congenital malformations. Immunizations are available through the health departments to the indigent population for smallpox, tetanus, diptheria, typhoid, polio and whooping cough. There were 69,911 immunizations for smallpox, 126,416 for diphtheria, 176,694 for tetanus, 78,263 for

whooping cough and 510,901 for polio given during the year. Continued efforts must be made to keep up the immunity level of this age group in order to prevent these diseases. Samples of local population have been made to determine the immunity level and these reports show that a large percentage of preschool children are still not protected against the diseases for which prevention is available.

Services of the Developmental Evaluation Clinic of Miami for this age group are described elsewhere.

SCHOOL HEALTH

At the present time the school health services may be summarized as follows: schools and county health departments encourage the parents of preschool children to secure the necessary immunizations and physical examinations from their family physician before entering school. If these services are not obtained before entering school, then the health department with the aid of teachers, or volunteer workers such as the Gray Ladies, do certain screening tests. These tests are for vision, hearing, tuberculosis and intestinal parasites. Some funds have been available to help the county health departments in the provision of equipment for these tests. Teacher observations are made for illnesss. Physical examinations are not done on every child routinely by a physician but usually only on those children referred by a nurse and/or teacher. Immunizations are not usually offered routinely in the schools, as was done previously, but efforts are being made to promote these services in the physician's office and at the health department clinics at regularly scheduled times.

The health department staff assists schools with sanitation problems, in their school lunch services, with special classes and in instruction in health. Movies, demonstrations and talks are among the methods of instruction.

In schools seeking accreditation, the principal is required by the State Department of Education to designate a teacher to serve as School Health Coordinator. The title indicates the duties and responsibilities. Health department staff members working with the Coordinator assist in bringing local persons and resources into focus for the school health program. These include physicians, dentists, churches, hospitals, PTAs and other groups interested in the health of the school child.

"We learn best by doing" is one of the tenets of educators. Based on this belief, the State Board of Health and the State Department of Education some years ago developed a plan for assisting teachers in learning about community resources available to them for the school health program. At the same time, the plan provided that the teachers could earn 3 hours of credit at the university of their choice. During 1960 the fifth Teachers Project in Health Education was conducted with 76 teachers enrolled from 22 counties.

Academic work was given at the University of Florida, Florida State University, University of Miami and Bethune-Cookman College. During the time allocated for field experiences teachers worked in the county health departments in their home counties for 13 days, thus seeing first-hand the program of the county health department and those of other official and voluntary health agencies.

In the 5 years in which the project has been conducted, 257 teachers have availed themselves of the opportunity and have urged that the plan be continued. The plan originally was designed for school health coordinators, many of whom have enrolled, but later it was opened to qualified teachers interested in the health of the school child.

An analysis of the data collected in a special study of a junior-senior high school late in 1959 reveals the need for a series of planned investigations of other such schools in the state to determine, more adequately, the school health needs of the adolescent.

In addition to the above, the school health program is being advanced by interested agencies through conferences and training programs on the state level.

PREMATURE PROGRAM

With the close of 1960, the Premature Demonstration Center, Jackson Memorial Hospital, Miami completed 10 years of service to thousands of babies born prematurely. In this period the Center likewise provided training and experience for several hundred physicians and nurses in the care of the tiny infants.

Through a grant from the Children's Bureau, hospitalization has been provided for 2004 infants during the 10-year period. In addition many other babies received care which was financed privately or under other programs. Infants hospitalized at the center were drawn from Dade and adjacent counties where facilities either were not adequate or available.

During the year, 2 five-day Seminars on Premature Infant Care were held. One was given for physicians and nurses, the other for nurses only. A 2-day Short Course for Physicians was held with 13 physicians in attendance. Seventy-two hospital nurses were enrolled in the 2 seminars and several public health nurses attended as observers. This brings to 216 nurses and 34 physicians the number enrolled for these special training courses given at the center since 1958.

In addition, students from the School of Nursing, Jackson Memorial Hospital, and students affiliated with the hospital from Schools of Nursing at Florida State University and Barry College were assigned to the center for periods of training. Interns and resident physicians from Jackson Memorial Hospital also are routed through the Center for practical experience in premature infant care.

The training programs have included practical experience in the nurseries and lectures supplemented by visual aids and the presentation of illustrative clinical material. During the year the training opportunities at the Center were opened to physicians and nurses from Georgia, Alabama and South Carolina.

A 1-day Demonstration Clinic on premature infant care was held at Pensacola to serve Escambia and 6 other northwest Florida counties. Approximately 125 persons in nursing categories attended, 70 of whom came from the 21 hospitals in the area. At the session for physicians, 18 were in attendance. The programs were presented by a team of physicians and nurses who were members of the staff of the Demonstration Center and the Dade County Department of Public Health.

A Manual of Procedure on care of premature infants was prepared by the Premature Demonstration Center and has been distributed to Florida hospitals and county health departments. A manual prepared by another State Health Department entitled "Standards and Recommendations for Public Prenatal Care" has also been distributed to each county health department.

A qualified nurse-educator has been added to the staff of the Premature Demonstration Center to assume responsibility for developing a longer term training program for nurses. Plans for the extended training course will enable nurses enrolled to have considerable time in nurseries where they will be caring for premature infants daily. Other practical experiences, lectures and conference groups are envisioned.

A slide series and accompanying texts, developed with cooperation from staffs of the Center, the Department of Pediatrics, University of Miami School of Medicine and the Dade County Department of Public Health, were used enthusiastically during the year. The slides show 5 important phases of premature infant care and were booked 66 times. Viewing audiences were medical students, nurses, hospital staffs, hospital trustees and similar groups. Eleven complete sets and 1 partial set were sold to Schools of Public Health, medical schools and State Departments of Public Health in other states.

Revision of a pamphlet "Preemie Problems" was completed and published by the Division of Health Information during the year. It will be used by this bureau for distribution to a general audience interested in the problems of premature infants and their families.

HEALTH SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

This special project to develop health services for migrants is now in its fifth year of operation. Personnel engaged in the project include 6 public health nurses, a social work supervisor, health educator, nutritionist, sanitarian, 2 clerks and 4 part-time physicians who offer health services to migrant workers, especially women and children.

This program is not a sporadic emergency health service but rather a planned health program organized to fit the health needs, the cultural background and the living and working conditions of the specific migrant population served.

The program has demonstrated effective ways to provide service through multipurpose family clinics held at night, nursing visits to camps on a regular schedule, a liaison worker as intermediary between health workers and families, and intergroup cooperation to provide curative as well as preventive care with local physicians, hospital administrators and public health and public welfare workers involved.

The physicians and nurses have continued the family clinics, giving special attention to prenatal and postnatal factors which influence the health of the mother and child.

The social worker continues in the development of community health resources and the utilization of these resources by the migrant workers.

The nutritionist has established mothers' classes demonstrating ways in which available foods can be utilized to provide a maximum diet with minimum waste, and has been instrumental in the development of sewing and homemaking classes for younger migrants.

The health educator and liaison worker have conducted studies to determine communication levels in an attempt to develop a health vocabulary which could be understood by all migrants. They have also investigated differences in the utilization of health services when migrants find themselves part of a minority group within the migrant community. An example is the study of Negro migrants in Immokalee where the majority of migrants are from Texas or Mexico.

The sanitarian has established schools for the landlords of various rental units. In these classes he has tried to help prevent the abuse of property by training the landlords how to instruct the migrant renters in the proper use of living facilities.

During the past 6 months the entire staff has been processing the data which they have accumulated while carrying out the service aspects of the project during the past 4 years. This data will be compiled and a final report of the project will be ready for publication in the spring of 1961.

TENTH ANNUAL POSTGRADUATE OBSTETRIC-PEDIATRIC SEMINAR

The tenth annual seminar was held at Ormond Beach under the sponsorship of the Bureaus of Maternal and Child Health of the State Health Departments of Florida, Georgia, Alabama and South Carolina, the Maternal Welfare Committee of the Florida Medical Association and the Florida Academy of General Practice. Physician interest in this 3-day

program was at a high level, although there was a slight decrease in attendance. Some of the states discouraged their nurses' attendance because of a lack of travel funds. Table 17 shows the breakdown of registration by states and profession.

TABLE 17

1960 POSTGRADUATE OBSTETRIC-PEDIATRIC SEMINAR
Registration by States

STATE	Doctors	Nurses	Total
Alabama	35	9	44
Georgia	70	0	70
South Carolina	41	1	42
Other States	9	0	9
Florida	152	66	218
TOTALS	307	76	383

Of those attending in 1959, 74 per cent were physicians; this percentage increased to 80 in 1960.

CONSULTATIVE SERVICES

Since more than 90 per cent of Florida's child population have no chronic diseases or handicaps which require special health programs, continued emphasis has been given to the training of the adult population in an understanding of the problems which they will encounter in rearing their normally healthy children. Discussion groups, workshops and seminars have been held in various parts of the state by the consultant on child growth and development. A total of 103 programs reaching approximately 5000 parents, educators, welfare workers and health personnel were held during 1960. Many times they were sponsored by lay groups but in each instance the county health department was involved in the planning or the presentation of the program.

Several new programs have been attempted and the results suggest the need for future exploration.

In 1 county regular monthly meetings were scheduled with a group of 12 teenagers and their parents. The meetings were problem centered, focusing upon areas which the young people found confusing. It was interesting to find that these group meetings lead to greater understanding between the parents and children and the diminishing of physical complaints as a reason for failure to perform academically or socially.

In 3 counties the health officer and consultant on child growth and development presented seminars on "The Normal Process of Growing Up" to senior high school students. These were met with an enthusiastic reception and the demands for future programs suggest that this might

be considered as a meaningful part of the secondary school health program.

MENTAL RETARDATION

Although the problem of mental retardation in Florida has not changed significantly in 1960, it continues as a major concern of this bureau, and new factors pertinent to the problem must be considered.

An investigation of the incidence of mental retardation reveals that of the 112,733 children born in Florida in 1959, it is estimated that 3 per cent, or 3382, were mentally retarded. Mortality figures indicate that of this number approximately 1707 died during the year 1959. Thus, at least 1675 mental retardates were added to the 1960 child population. Of this group about 336 will be admitted by the state institutions, but some 1342 will remain in the community as the responsibility of the parents, school system, welfare department, family physicians and the county health departments.

Not long ago mental retardation was seen as a short-term problem which after a period of stress to parents and inconvenience to physicians and the community alleviated itself through mortality. During its brief existence it was seen primarily as the responsibility of the parents and educators. Now, because of the increase in skills of medical science, more mental retardates enjoy a normal life span. As this group must have extended special health, education and welfare programs to maintain its existence, it must be considered a type of chronic disease.

The solution to chronic disease is, of course, the prevention of the disease; but to prevent disease it is necessary to understand the causes of the disease so that they may be removed. Such a solution predicates research.

The special project in mental retardation, the Developmental Evaluation Clinic, Miami, is now in its third year and is carrying on operational research in early detection, diagnosis and management of mentally retarded children. The staff consisting of a pediatrician, a psychologist, 2 social workers and a public health nurse work with preschool children suspected of mental deficiency who are referred by physicians. Particular emphasis is given to the study of the effectiveness of the medical team approach in the handling of this disease and to the role of the public health nurse in helping parents to care for these children at home. The most significant finding of this project to date has been the frequency with which other organic defects masquerade as mental deficiency. This points up the need for increased diagnostic skills in mental retardation on the part of medical personnel.

Another research phase of the program is a study of the early detection of phenylketonuria. A survey is now in progress in which all mentally retarded children will be screened for phenylketonuria. To date the data is inadequate for the development of any conclusions; however, the trend

indicates that the frequency of phenylketonuria may exceed the now-accepted incidence of 1/20,000. While awaiting some of the answers which research may provide, the bureau must provide what service it can, and train personnel in the care and management of this chronic disease.

The Developmental Evaluation Clinic provides diagnostic and consultative service while pursuing the studies previously mentioned, and 4 of the child guidance clinics are staffed with an individual who spends a major porton of his time in diagnosis and consultation with mental retardates and their families. In terms of need, however, the service aspect of the program is minimal.

Although the bureau is well aware of the need for expanded research and service facilities, it is felt that another important part of the program is the training of professional personnel so that they will understand the scope of the problem, the resources available, the techniques of training the mental retardates and the counseling of their parents.

In 1959 a 2-day training and orientation program in mental retardation was initiated at the Sunland Training Center, Gainesville, and a 1-day seminar developed for presentation to the county health departments. The public health nurse consultant and the consultant on child growth and development carried on these programs during 1960. A total of 6 orientation programs were offered at Sunland and 14 seminars were presented in the counties. A total of 459 professional workers from 58 of the 67 counties have participated in the programs. A breakdown by profession and type of program is shown below:

TABLE 18

NUMBER ATTENDING ORIENTATION

	At Sunland	In Community
Public health nurses	104	239
Mental health workers	24	12
Social workers	21	35
Vocational rehabilitation counselors	17	4
Teachers	10	79
Others (physicians, dentists, clergy, volunteer workers)	29	90
	205	459

In the light of the enthusiastic response to these programs, it is felt that they must be expanded to include parents and teachers of the mentally retarded. Plans for such programs are now being developed and will be tried out during 1961.

BUREAU OF PREVENTABLE DISEASES

JAMES O. BOND, M.D., M.P.H.
Director

In contrast to the previous year, the major administrative positions in the bureau remained relatively constant during 1960. The position of acting director of the Division of Epidemiology was assumed by James F. Molloy, M.D. following the return of Robert E. Markush, M.D. to the U. S. Public Health Service in June. Marian B. McEuen, M.D. was added to the Division of Tuberculosis Control staff, and the Veterinarian Epidemiologial Intelligence Service Officer position held by Dr. James McQueen was transferred to Dr. Wilbur Hubbert.

The major function of the director of the bureau is to maintain a coordinated program by the 4 divisions. During 1960 the most outstanding example of a cooperative effort occurred during Hurricane Donna. The 7 physicians and 2 veterinarians in the bureau immediately went on 24-hour stand-by alert. The first physician was called out on Sunday, September 11, following the hurricane's passage through the state on Saturday, to head an emergency team to the upper Keys. On Monday a second physician went to the Hardee-DeSoto County area, and on Tuesday a third traveled to the hard-hit Naples-Everglades City area. These physicians all assisted local personnel in emergency medical care, immunizations and emergency sanitation programs. On Wednesday a fourth physician was dispatched to the Keys to conduct an emergency health survey to assist the State Health Officer and the Governor in a decision regarding special release of funds for clean-up through the State Board of Health.

The Division of Tuberculosis Control dispatched 1 of the x-ray unit portable generators to the Everglades City area. This unit supplied emergency power to the hospital until routine services were reinstituted. The milk sanitarians of the Division of Veterinary Public Health obtained a list of all dairy processing plants in the state where emergency supplies of dry ice could be obtained.

Personnel in the Division of Epidemiology familiar with purchasing and supplying biologicals and medical supplies arranged for several emergency shipments of typhoid vaccine, needles, syringes and other medical supplies to the stricken areas. An emergency supply of 20,000 cc of gamma globulin, supplied by the American Red Cross, was distributed to the flooded areas to assist in the prevention of infectious hepatitis outbreaks. Thus, virtually this entire bureau was available and used as a cooperative team in meeting the public health problems of this disaster.

Other activities during the year which have involved cooperative efforts between 1 or more divisions have been coordinated by the director of this bureau. The venereal disease investigators were effectively used to assist in communitywide health surveys in St. Petersburg, Miami and Jackson County. In the summer an outbreak of staphylococcal infections

in a hospital was investigated jointly by the Division of Epidemiology, an industrial hygiene expert from the Division of Radiological and Occupational Health, and personnel from the Technological Service Branch of the Communicable Disease Center.

The Division of Radiological and Occupational Health in cooperation with the Division of Veterinary Public Health established a sampling system for examination of Florida-produced raw milk for radio-strontium and cesium. This network is separate from the sampling of finished milk products, also maintained as part of the USPHS national network.

The Division of Veterinary Public Health and the Division of Epidemiology continued their joint surveillance of arthropod-borne encephalitis in humans and in animals. Less extensive joint surveillance was maintained over leptospirosis and brucellosis. The problem of no-lesion tuberculin reactors in cattle herds was the subject of a special study by the Division of Veterinary Public Health, Division of Tuberculosis Control mobile x-ray unit and the director of the special research project into the epidemiology of unclassified mycobacteria.

The stimulation of research within the bureau is an important function of the director. Formal research projects during 1960 include the Unclassified Mycobacterial Project supported by a NIH grant. This project is now in its third year and continuation for 3 more years is planned. A second formal project has been the Physician Morbidity Reporting Research Project in Miami, conducted jointly with the Miami Chronic Illness Project, Inc. This project is attempting to develop and evaluate a special morbidity reporting system for chronic illnesses. The system is based on a volunteer sample of physicians, rather than relying on the compulsory reporting by all physicians. If the system is proven practical and reliable it is planned to use it to supplement routine morbidity reporting throughout the state for selected communicable and chronic diseases. Three sample periods were completed in Dade County in 1960.

The special research project in Miami to evaluate live poliovirus vaccine received considerable attention from the bureau during the early part of 1960. This project was a joint effort of the University of Miami, Dade County Department of Public Health and the Dade County Medical Society. The Division of Epidemiology carried out the pre-vaccine survey of the Dade County population for polio vaccine and antibody status. Consultation from bureau personnel was obtained in setting up the epidemiologic surveillance for this project, and there was active participation in evaluation of cases and collection of data on contacts outside of Dade County.

A special research project on arthropod-borne virus activity in birds and mosquitoes in Pinellas County was inaugurated during 1960. This project involved coordination of personnel in the bureau, the Pinellas County Health Department and the Communicable Disease Center, USPHS. During the fall of 1960 a large NIH grant request for arthropod-borne virus research on a statewide scale was proposed and submitted.

Although unsuccessful, an NIH grant request was submitted for special studies in radio-epidemiology, to be carried out primarily in the Division of Radiological and Occupational Health. The occurrence of reasonably wide variations in background radiation levels in Florida affords an unusual opportunity to study the population effects, if any, of different levels of radiation in the low dose range. Due to lack of funds, activity in this research project so far has been limited to analysis of mortality data relating to leukemia, cancer and congenital malformation deaths.

In the Division of Tuberculosis Control limited studies have been stimulated for evaluation of the Heaf tuberculin test. Preliminary studies in Florida indicate that the Heaf test is equivalent to a 100 tuberculin unit Mantoux rather than the 5 T.U. routinely used for screening. These investigations will be continued until definite answers are obtained.

The director presented or represented various activities of the bureau to groups in Florida and elsewhere. The Regional Conference on Research in Public Health was attended in April. The activities in Unclassified Mycobacteria Research were presented to a symposium at the annual meeting of the American Public Health Association. The bureau and the State Board of Health were represented on the Surgeon General's Agenda Committee for the Committee on Poliomyelitis Control. Activities within the state on arthropod-borne virus investigations were summarized in a presentation to the Florida Public Health Association in Miami.

DIVISION OF EPIDEMIOLOGY

JAMES F. MOLLOY III, M.D.
Acting Director

SPECIAL COMMUNICABLE DISEASE ACTIVITIES

INFECTIOUS HEPATITIS

Reported cases of infectious hepatitis rose from 242 in 1958 and 342 in 1959, to 1108 in 1960. Hepatitis reached epidemic proportions in many parts of the state during the past year. Eleven epidemic investigations were carried out during that period and 2 common source epidemics were uncovered. The remainder of these outbreaks were found to be due to contact spread.

Figure 4 illustrates the seasonal pattern of infectious hepatitis for the current year in comparison with the pattern for the years from 1952 through 1959. An unusual increase in reported cases began in October 1959 and continued through 1960. The peak of reported cases occurred in April 1960. A slight decline of reported cases was seen during the summer months. This was followed by a rise in reporting through the autumn and winter.

Table 19 outlines the various attack rates for the groups under consideration. The attack rate for the white population is approximately twice as high as that for the nonwhite group. There was no remarkable difference in attack rates for males and females.

Infectious hepatitis occurred most frequently in the younger age groups. The largest percentage of cases occurs between the ages of 5 and 9. The 10 to 14 and the 15 to 24 age groups also had high attack rates. The type of daily activity and personal hygeine was thought to be an important factor in the spread of disease in these particular age groups. Close personal contact in play is common among school age children. This is also the age in which the habit of hand-washing after toilet use is rare.

A small supply of gamma globulin was made available to the State Board of Health and was distributed to county health departments. Gamma globulin was recommended in prophylactic doses for household contacts of a diagnosed case of infectious hepatitis. Special emphasis was placed on the protection of pregnant women who had been exposed. The frequent occurrence of acute yellow atrophy of the liver in pregnant women who have infectious hepatitis is the indication for this variation from the general policy.

POLIOMYELITIS

The year ended with a total of 66 reported cases of poliomyelitis. Forty-seven of these were paralytic cases. This compares with the 197 reported in 1959 and the 252 reported in 1958. Paralytic cases dropped to 36 per cent of the number of reported paralytic cases for the previous year.

In cooperation with the U. S. Public Health Service, the intensive poliomyelitis surveillance program, which had been instituted in 1957, was again carried out by the division. In 1960, a large scale oral poliomyelitis vaccination program was carried out in Dade County by the Dade County Department of Public Health, the Dade County Medical Association and the University of Miami. An oral vaccine preparation was given to 425,000 residents in that south Florida county. Consequently, during 1960 follow-up was done on all cases of poliomyelitis to determine whether or not they had been recipients of the oral vaccine or had been in contact with anyone who had taken it. In addition, the usual Salk vaccine information and other data were obtained.

No epidemics were reported in the state, and too few cases occurred to warrant a detailed analysis here. It is important to note that the 5 deaths from poliomyelitis which occurred in Florida during the year were in unvaccinated adults.

During 1960 this division cooperated in carrying out poliomyelitis immunization surveys in 3 different parts of the state. These surveys are based on the Communicable Disease Center quota sampling technique. Their purpose is to point out to the county health department which

segments of a given population may be poorly vaccinated. These particular population groups can then be approached in an intensive manner. Surveys were carried out in Pinellas, Dade and Jackson Counties. The results in Pinellas and Dade Counties were similar to those seen in Hillsborough County in a survey which was done in November 1959. In these urban areas, the upper white socio-economic groups are found to be well immunized with Salk vaccine (over 80 per cent children under 15) whereas the lower white and nonwhite population groups are found to be very poorly immunized (less than 30 per cent).

Jackson County is the first entirely rural area in the state in which an immunization survey was carried out. In this particular county, it was discovered that all population groups, regardless of race or socio-economic status, were relatively less well immunized against poliomyelitis. Protection was found to be somewhat better in the upper white economic groups as compared with the nonwhite groups. The socio-economic differences which were observed were less pronounced than those seen in the more urban areas of the state.

Sixteen laboratory confirmed cases of other enterovirus infection were found during the year. In 10 instances, a Coxsackie virus was identified. ECHO virus were isolated from 6 patients; however, no outbreaks of aseptic meningitis were reported .

DIPHTHERIA

A total of 73 diphtheria cases were reported in Florida in 1960, as compared with 83 cases reported in 1959. Two diphtheria deaths occurred during the year. One of these was in Putnam and the other in Hillsborough County.

The majority of cases were centered in the Jacksonville and Tampa areas. Other small outbreaks of diphtheria also were reported from Fort Lauderdale and Palatka. More than twice as many Negro cases were reported than white. Two-thirds of these occurred in children under 9 years of age, and more than half of these 4 years of age or under. Reported cases are about equally distributed between the sexes. Those reported in 1960 again indicate that this disease has its highest attack rate in preschool Negro children.

In previous years, clinical resistance of this disease to antibiotics was not reported. During 1960, in Duval County, 2 diphtheria carriers were found to be clinically resistant to penicillin. One 5 year old Negro male remained a nasal carrier for 2 months in spite of continuous intramuscular penicillin therapy. A second Negro child carried the organism for 8 weeks while on penicillin therapy. Under ordinary circumstances patients become bacteriologically negative after 2 days of therapy.

In January 1960 an epidemiologic investigation was carried out on cases of diphtheria which had occurred in Jacksonville. Ninety-one per cent were under 14 years of age. The highest attack rates occurred in

the 0-4 age group. All but a few were Negroes. More than 90 per cent occurred in unvaccinated persons.

During the course of the Jacksonville investigation, 1 family group was discovered to have recurrent attacks of the disease. Multiple nasopharyngeal specimens were obtained on all the household contacts of these cases by the Jacksonville City Health Department, but no carriers were found. Following the second outbreak of diphtheria, in the same family group, nasopharyngeal specimens were again obtained on all household contacts. Again they were negative. At that time it was decided to obtain specimens from the cutaneous ulcers which were found on the landlady who lived in this household. All of the cutaneous lesions which were cultured were found to contain the mitis strain of *Corynebacterium diphtheria.*

On the basis of this finding a survey was consequently carried out in the Dermatology Clinic of the Duval Medical Center to determine whether or not cutaneous diphtheria was a common occurrence during an epidemic period in this region. No further cases were found by means of the survey techniques employed.

Since the discovery of the original cutaneous case in the Duval County area, 5 other cases of cutaneous diphtheria have been reported in Florida. Although the cutaneous form of this disease is of rare occurrence in the state, it is found with some degree of regularity if the diagnostic index of suspicion is high. Epidemiologic evidence indicates that cutaneous carriers are capable of spreading the disease to other persons.

LEPTOSPIROSIS

During 1958 and 1959 diagnostic facilities were added to the State Board of Health laboratories which assisted in the clinical diagnosis of leptospirosis. During that period, 28 cases of leptospirosis were found to have occurred. Retrospective investigation was carried out on these cases to determine what the clinical and epidemiologic characteristics of this disease in Florida might be. All cases occurred between June and October. The peak incidence took place during the month of July. Three clinical groups were seen. A few cases were found to have developed the severest form of the disease—classical Weil's Disease. The severest form was usually seen in adults. The rest of the cases were characterized clinically either as aseptic meningitis or a non-specific influenza-like syndrome. Children and young adults were found to develop this type of disease. The majority of the patients were residents of the rural areas, and were found to have either direct or indirect contact with infected domestic farm animals.

VIRAL ENCEPHALITIS

In the fall of 1959 an outbreak of viral encephalitis occurred in St. Petersburg. This accounted for the reporting of 73 cases of viral encephalitis in 1959, which is by far the greatest number ever reported in 1 year

for the state. A stepped-up encephalitis surveillance program, during 1960, resulted in the reporting of 55 cases of viral encephalitis. This is the second greatest number of cases ever reported. Cases of viral encephalitis reported during the year were followed-up to determine the clinical and epidemiological characteristics during a non-epidemic year. This type of surveillance had never before been carried out in Florida.

Twenty-four of the cases of acute viral encephalitis reported were of undetermined etiology. Many of these had extensive virus studies performed and epidemiologic information was obtained on all of them. The mortality rate in this group was 50 per cent. With 2 exceptions, all of the cases were under 10 years of age or over 40 years of age.

Twenty-nine cases of encephalitis reported during the year were associated with acute childhood diseases. Twelve of these were cases of measles encephalitis which occurred in children under 8. Two of these cases, reported from Dade County, resulted in death. Acute encephalitis associated with mumps occurred in 12 instances. The majority of these were in children under 7 years of age. Post varicella encephalitis was reported 5 times. No deaths occurred in this group, nor in those cases which were associated with mumps.

The increased number of cases of mumps and chickenpox which occurred in Florida this year, probably accounts for the rather large number of cases of encephalitis which happened to be associated with acute childhood diseases.

One unusual case occurred in Nassau County associated with the administration of the Semple rabies vaccine. A 7 year old boy received 7 rabies injections following a dog bite. After the seventh injection, encephalitis with an ascending paralysis occurred. The patient recovered.

Two cases were reported which were found to have evidence of recent infection with arthropod-borne viruses. One of these was a 30 year old white female who had been a resident of the state for 1 year. She developed an acute febrile illness with headache and stiff neck. Her mental status rapidly deteriorated, and stupor developed. Recovery was complete in 2 weeks. This patient exhibited a fourfold titer rise for the complement fixing antibody for the St. Louis encephalitis virus from 1:16 to 1:64.

The second case was a 56 year old white male who was a lifetime resident of Florida. His illness was characterized by low grade fever, visual difficulties, headaches and weakness. Recovery was said to be complete. This patient had a fourfold titer rise for complement fixing antibody for Eastern Equine Encephalitis virus from less than 1:4 to 1:16.

INFLUENZA

During the early part of 1960 a mild epidemic of Asian influenza swept the United States. The first occurrence of this disease in the state was reported in Bunnell in January. The outbreak was investigated by

this division. It was estimated that approximately one-third of the population of this community was affected by the disease. During the process of examining these patients, viral specimens were obtained. Multiple isolations for Asian influenza virus were made from the specimens.

Sixteen thousand and thirty-three cases of influenza were reported in the state. This is 5 times the amount reported during the previous year; however, no major urban epidemics occurred within the state. Florida, as a whole, experienced significant excess mortality during the 1960 wave of influenza. This mortality was found to have occurred primarily in the population over 65, and indicates the age group in which routine influenza immunizations are most useful.

HOSPITAL ACQUIRED STAPHYLOCOCCAL DISEASE

During 1960 a team of epidemiologists, bacteriologists and environmental engineers was organized within the State Board of Health in order to provide complete diagnostic and investigative facilities to those hospitals troubled with staphylococcal disease. Since most hospitals are reluctant to request outside assistance, only 3 hospitals asked for epidemiological investigation of their outbreak of this disease.

Two of the investigations carried out were done on a rather short term basis and without the use of the special laboratory techniques which are available. In both of these instances a probable source was traced to general breakdown in aseptic techniques. Specific recommendations were made in the areas where lapses in technique occurred.

In 1 hospital a full scale investigation was carried out over a period of several months. In this instance an exhaustive investigation was done in conjunction with extensive phage typing. Finally, an environmental survey was carried out within the hospital. In this particular institution the epidemiological information indicated that direct contact with lesions and carriers was not the probable cause of the outbreak. The data which has been gathered pointed to some sort of environmental contamination in 1 of the areas of the hospital. The subsequent survey which was carried out by the environmental engineers pointed to a breakdown in 1 of the mechanical devices used in this area. It was thought that this device was the means by which the environment had become contaminated resulting in the infections of patients.

During 1960 a manual, "Pyogenic Hospital Infections, A Guide for Control," was prepared and published. It is intended to instruct hospital staffs concerning the standard epidemiologic surveillance procedures necessary to control or prevent hospital epidemics of staphylococcal disease.

FOOD POISONING

Four outbreaks of food poisoning were reported during 1960. Approximately 500 persons were involved in these outbreaks. Under ordinary circumstances the investigation of such occurrences is usually carried

out on a local level. In 1 instance a food outbreak investigation was carried out by this division. The patients were found to have become infected with *Salmonella berta* after consuming a turkey dinner. The meat in this particular instance had been prepared approximately 12 hours before being served, and was left unprotected at room temperature during the interim. Two other outbreaks of Salmonella food poisoning also occurred. In 1 instance the contaminated food was turkey, and in the other, lobster. One outbreak of staphylococcal food poisoning was reported. This occurred in Dade County and resulted in clinical illness in approximately 150 patients.

OTHER COMMUNICABLE DISEASE INVESTIGATIONS

An investigation was carried out of an occurrence of epidemic erythema annulare. Twenty-five cases were found to have occurred in association with a Duval County school. Multiple laboratory studies were carried out on the cases which occurred in this epidemic. No etiological agent was determined. This particular disease has not been previously reported in the United States.

In August 1960 an outbreak of sea-bathers eruption occurred in Panama City. It is estimated that between 20 to 50 per cent of the tourists swimming in the Gulf Beach area at that time developed an acute papular eruption. It was characteristically under the bathing suit. Cases of this disease have been reported sporadically in Florida previously; however, no concentration of cases have been seen in this state up to this time. Laboratory examinations indicated that this disease is not the schistosome dermatitis reported from the other areas of the county. No specific etiologic agent was isolated by the laboratory methods used in studying this outbreak.

OTHER DIVISION ACTIVITIES

SEROLOGIC AND PARASITE SURVEYS

In cooperation with the county health departments, 3 sampling surveys were carried out during 1960.

After the arthropod-borne encephalitis epidemic which had occurred in St. Petersburg the previous fall, a sampling survey was carried out in St. Petersburg and Clearwater. Interviews and blood samples were obtained from the random list of selected households. The primary purpose of this survey was to determine the number of inapparent infections which had occurred in Pinellas County during the epidemic. The results have indicated that approximately 5000 inapparent infections had occurred during the period when 70 clinical cases were seen, 6 of which resulted in death.

Prior to the oral vaccine field trial in Dade County, a random sampling interview and serologic survey was carried out in the Miami

area. Its purpose was to determine the level of Salk immunization for the various population groups. The extensive serologic sampling which was done resulted in an estimation of the numbers of persons in the community with no demonstrable antibodies to the 3 polio strains. This survey indicated that Dade County was a community well immunized with Salk vaccine. The lowest levels of immunizations were found to be in the lower white and nonwhite population groups. A similar survey conducted in Hillsborough County in December 1959, also identified the nonwhite population as having the lowest levels of Salk immunizations.

The third survey which was carried out using the Communicable Disease Center quota sampling technique was done in Jackson County. In this area the question arose to whether or not Jackson County had a high incidence of amebic dysentery. Interviews and stool specimens were obtained from the randomly selected households. The endamoeba histolytica carrier rate of Jackson County was found to be 1.6 per cent. Carrier rates of less than 10 per cent are considered to be normal.

In all 3 surveys, the Salk immunization status of the household members was obtained. These surveys pointed out the weak spots in the various immunization programs being carried out by the county health departments.

DISASTER AID

Following the passage of Hurricane Donna, 1 of the division personnel was assigned to hard-hit Everglades City. A temporary clinic was set up in this community from which emergency medical care and prophylactic immunizations were administered for 2 weeks.

CLINIC ACTIVITIES

During the absence of the regular clinic physician, or the county health officer, the division provided physician services to the Jacksonville City-County Venereal Disease Clinic and to the Clay County Health Department. In addition, a monthly immunization clinic was conducted at the State Board of Health for the benefit of employees and their families.

EDUCATION

During 1960, division personnel participated in the following lectures, seminars and training programs: State Board of Health Sanitarians Training Course; Venereal Disease Seminars; Health Officers Institute on Applied Epidemiology; Florida State University School of Nursing and Brewster-Duval School of Nursing.

In addition, scientific papers were presented at the 1960 Annual Meeting of the Florida Medical Association, and at a Brewster Hospital staff meeting.

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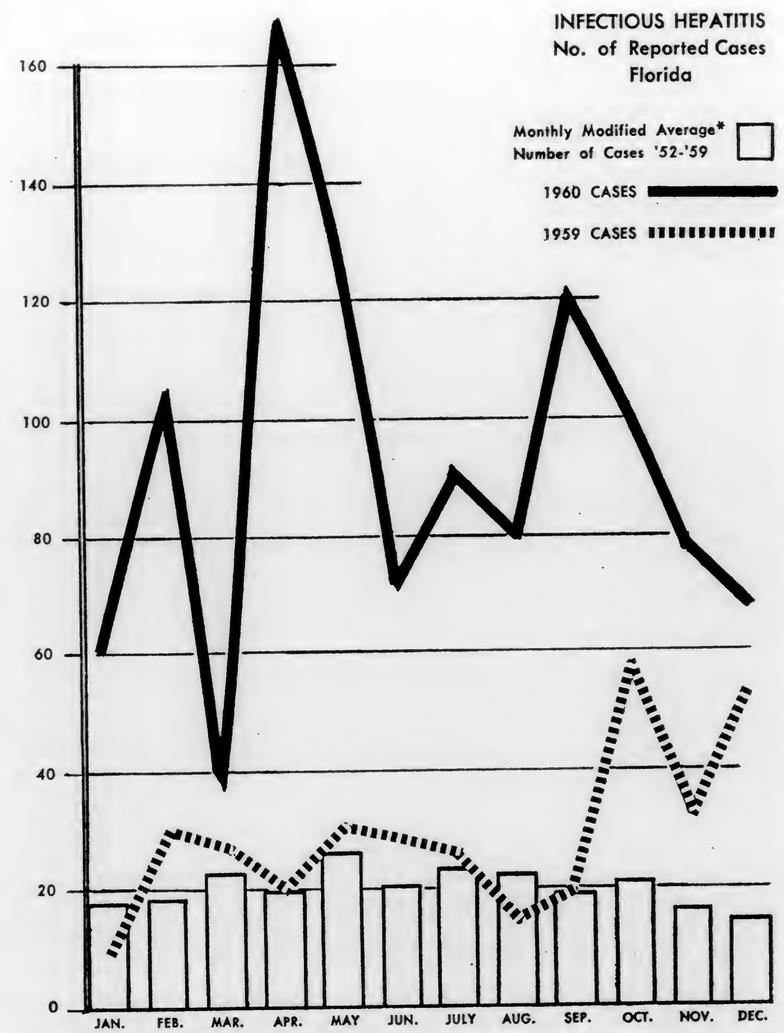
TABLE 19
INFECTIOUS HEPATITIS CASES AND RATES PER 100,000 POPULATION, FLORIDA, 1960 BY RACE, SEX AND AGE

RACE AND SEX	CASES	RATE	AGE	CASES	RATE
TOTAL	1,108	22.6	0-4	46	8.9
White male	494	25.3	5-9	243	57.7
White female	466	23.2	10-14	173	49.7
Nonwhite male	72	15.7	15-24	255	36.4
Nonwhite female	51	10.6	25-34	151	19.4
Unknown	25	.....	35-44	85	11.6
			45	86	6.1
			Unknown	69	.....

FIGURE 4



*High and Low Year for Each Month Eliminated

VENEREAL DISEASE CONTROL PROGRAM

HARVEY M. BURNETTE
Administrator

This program maintained 3 basic activities during 1960; education, morbidity reporting and early syphilis epidemiology.

Education has been geared toward aiding 3 specific groups. First, the venereal disease interviewer gives basic VD education to the infected case, which may be called patient education. Second, the county health departments and private physicians have received aids in diagnosing and treatment of VD patients. County health officers and VD investigators have distributed approximately 1200 manuals suggesting management and control of syphilis. These were distributed by individuals explaining the services available to the private physician through the county health departments and State Board of Health. A third approach is a long-term educational program in the public school system. The health educator assigned to the program has worked in 12 counties during the year. Regular classroom teachers and/or physical education instructors are given special instruction and teaching aids in communicable diseases, with emphasis on the venereal diseases. The teachers then correlate this material in their curriculum. If the youth of Florida are to be helped through education about venereal diseases, it must begin in the public schools since many homes and churches have been delinquent in this field. Real progress in reducing the VD problem will be achieved only by raising the general standards of educational, economic and recreational opportunities.

Morbidity reporting has continued to be a useful tool to evaluate the present problem. Reporting by the private physician and county health department has assisted in indicating areas with increased incidence of infectious syphilis. The attention and the assistance of the trained VD interviewer-investigators are then directed to these areas.

Total syphilis cases reported during 1960 were 4119, as compared with 4332 reported in 1959. However, infectious syphilis (primary and secondary) has increased tremendously during this same period. Six-hundred and thirty-nine cases of infectious syphilis were reported during 1960, as compared with 344 cases reported in 1959. Figure 5 shows the infectious syphilis cases reported during the past 5 years.

The increased number of primary and secondary syphilis cases reported indicates the need for well-trained VD interviewers and investigators. Low levels of infectious syphilis can be maintained if these cases are properly diagnosed, adequately treated and trained VD investigators are permitted to follow all cases. Many early syphilis cases are still not reported by private physicians, while still others seek medical care from "quacks." A greater number of private physicians are requesting the assistance of interviewer-investigators in controlling syphilis. The ultimate

goal in the control of syphilis is to assure that every infectious syphilis case is properly treated and good epidemiological follow-up procedures instituted.

Several epidemics of infectious syphilis occurred throughout the state during 1960; southeast, central and several northwest Florida counties. Several counties proved to be problem areas of such high incidence that the assistance of several VD investigators was required. At the close of 1960, central Florida continued to experience a high incidence of reported primary and secondary syphilis.

Reported cases of gonorrhea still come largely from VD clinics sponsored by county health departments, since private physicians continue to report very few cases. Therefore, gonorrhea statistics have little significance.

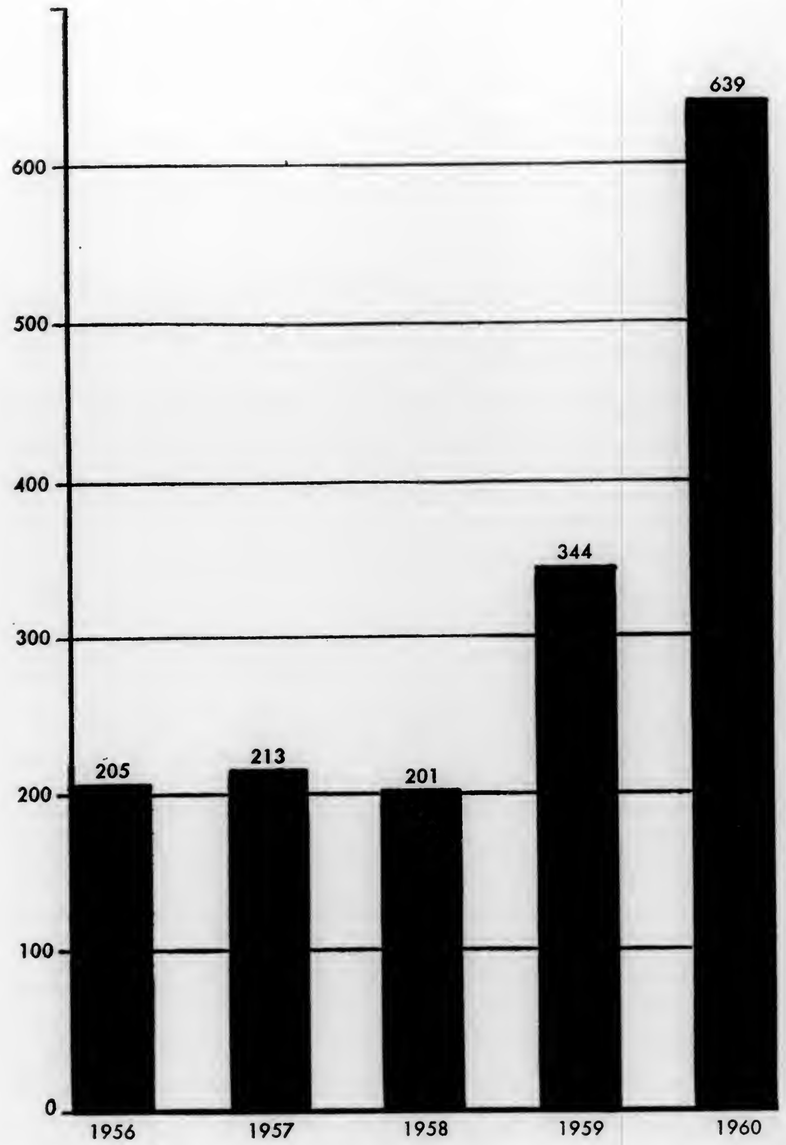
Other venereal diseases, including chancroid, granuloma inguinale and lymphogranuloma venereum, continue to be classified as minor venereal diseases, since the reported number by both the private physician and public clinic is small.

VD investigators visited 225 private laboratories in Florida during 1960. All these laboratories are approved by the State Board of Health for processing premarital serologies. Each laboratory was given a current manual on "Serologic Tests for Syphilis." Each laboratory was urged to cooperate in reporting all positive reactors for follow-up by the VD investigator, with consent of the private physician.

During 1960, 17 trained VD interviewer-investigators were assigned to the State Board of Health and districts throughout the state. Thirteen were assigned to county health departments or were responsible for a district including several counties. These assignments have permitted every health department and private physician in Florida to receive assistance when requested.

Personnel from the central VD Control Office continued to give technical assistance and advice, as well as administer the distribution of drugs and educational material.

FIGURE 5
REPORTED CASES OF PRIMARY AND SECONDARY SYPHILIS
FLORIDA 1956-1960



DIVISION OF RADIOLOGICAL AND OCCUPATIONAL HEALTH

EDWIN G. WILLIAMS, M.D.
Director

OCCUPATIONAL HEALTH

The Florida Development Commission recently reported that between January and June 1960, 315 new industrial plants had announced their intention to locate in Florida. These new plants plus the 62 announced major expansions are expected to increase the industrial working force by more than 10,000 persons to a total greater than 240,000 persons. Rapid growth such as this has been characteristic of Florida for a number of years and is expected to continue. There is little doubt that the overall occupational health problem will continue to keep pace with the economic growth of the state.

Occupational diseases reported by the Florida Industrial Commission form an index of incidence and character of such illnesses. It will be noted from Table 22 that the dermatoses are by far the most frequent cause of diseases related to occupations covered by the compensation law and that no deaths have been recently reported. *Parathion* is a prominent cause of illness and lost time in agricultural pursuits, and welders apparently do not use protective masks as routinely as would be expected.

FIELD ACTIVITIES

Occupational health personnel made 267 visits to 68 establishments employing about 18,000 persons. This reduction from 1959 totals reflects the change in program emphasis required by the intensive phosphate study during the last half of 1960. Although approximately two-thirds of the total of 68 establishments were visited between January and June, more than 96 per cent of the 438 samples for laboratory analysis were collected during the last 6 months of the year. More than half of the visits made during the year were revisits, most of these were made during the last half of the year in the air sampling phase of the phosphate study.

PHOSPHATE STUDY

Several complaints about in-plant working conditions and requests for the State Board of Health to investigate the problem were the precipitating stimuli that led to the decision to undertake the phosphate study. Although the complaints specified only 2 of the phosphate plants in the Polk-Hillsborough County area, the study was planned to encompass all the producers in the area. A joint State Board of Health-U. S. Public Health Service study performed in 1957 had indicated the nature of the program and the study was planned to be essentially a follow-up and expansion of the earlier work. To this end the engineer and the 2

chemists devoted essentially all of their time in the last half of 1960 to the study. Active cooperation and participation in the study were afforded by the Bureau of Sanitary Engineering, the Division of Sanitation and the Dade County Department of Public Health. Both management and labor groups showed interest in the study and willingness to cooperate with the study teams.

During 1960, only 1 phase of the planned study was completed; the initial contacts and surveys of the plants of the 10 companies in the area. With 1 exception the first round of in-plant atmospheric sampling was completed, the second round was started but is incomplete, a third round is planned. A program for testing flourine levels in the urine of workers was considered but was not begun. Some urinalyses were performed on division personnel. The analytical work on the in-plant samples collected for flouride analysis is only 40 per cent completed. Counts have been completed on each of the 132 samples collected for determination of dust in air. Noise measurements were made at 173 locations and sulfur dioxide determinations were made at 11 locations.

OTHER FIELD ACTIVITIES

Investigations of other requests, complaints or referrals from official agencies accounted for about one-fourth of the total visits. In most instances recommendations were carried out and resulted in the alleviation or substantial reduction of the offending condition. Examples were: Carbon monoxide hazard incident to open flame static eliminators in a printing plant; inhalation of hydrochloric acid fumes in a bottled water plant; trichlorethylene hazard in a degreasing shop in a military installation; consultation to a consulting engineering firm on dust counting techniques; elimination of dermatitis in a poultry processing plant by changing from the offending solution; assistance to the USPHS in obtaining air samples in a hospital for microbiological study; a study of the working environment in manholes in a large city where several explosions had occurred.

Self-initiated visits accounted for approximately one-fifth of the total visits. Some of these were made primarily as a part of inservice training for the chemist employed in April 1960. Such diverse establishments as lead smelters, ferrous foundries, neon sign manufacturers, plastic boat manufacturers, monument plants, automobile battery plants, drink-vending machine manufacturers and an airplane rebuilding shop were visited. Another series of self-initiated visits was made with a team of dermatologists from the USPHS in an attempt to delineate and define the current occupational dermatitis problem in Florida. In addition to plant and farm visits, conferences were held with several leading dermatologists in the state.

During the year considerable time was devoted to plans for the development of a county health department program in occupational health. It is thought that there are several areas in the state which could

support a creditable occupational health program as an identifiable part of the total county health department operations. One such area has a physician, nurse and engineer, each of whom has spent several years in industrial health problems, and a number of years in general public health operations. The proposed program will not sequester those people (and others) from the group as a whole but rather it will be integrated with the total health department activities. The plan is to establish this program on a developmental and demonstration basis to study its feasibility as a local solution to local problems with the state providing consultation and special services.

At the request of the State Board of Health, the USPHS assigned an occupational health nurse to the division to make a comprehensive survey of the needs for an occupational health nurse consultant as a part of the permanent personnel complement of the State Board of Health. As a result of her study, the USPHS was asked to assign such a person to the state to serve in this capacity.

LABORATORY ACTIVITIES

The division's chemists performed 425 analyses on 550 samples received during the year. In order to accomplish these analyses it was necessary to prepare 48 reagents, and to run 317 blanks, controls and standards.

The determination of the lead content of a variety of materials again this year constituted the largest number of analyses of a single type completed in the division's laboratory. The microscopic determination of dust counts on air samples collected during the phosphate study constituted the next largest number of completed analyses of a single type.

The determination of the fluoride content of air, urine and water samples collected during the phosphate study constituted the third largest number of analyses of a single type.

Determinations of stippling, hemoglobin, mercury and free silica made up the balance of the 425 analyses performed. The division cooperated with the USPHS Analytical Reference Service (lead-in-air testing program).

TABLE 20

OCCUPATIONAL HEALTH FIELD ACTIVITIES JANUARY-DECEMBER 1960

Number of persons or establishments given service	68
Workers employed	18,028

Personnel Visits to Plants	
Self-initiated	53
Requests or complaints	38
Agency referrals	19
Occupational disease reports	2
Revisits	155
Total	267
Services Rendered	
Routine inspection	27
Industrial hygiene survey	26
Technical study	65
Consultation	50
Follow-up	5
Discuss report	1
Air pollution (with Sanitary Engineering)	6
Nonoccupational investigation	1

Field Determinations of Atmospheric Contaminants	
Carbon monoxide	16
Combustible gases	12
Sulfur dioxide	11
Halogenated hydrocarbons	6
Chromic acid mist	3
Hydrogen sulfide	2
Carbon dioxide	1
Total	51
Physical Conditions	
Noise measurement	178
Air velocity measurement	15
Total	193
Samples Collected for Laboratory Analysis	
Fluoride in air	188
Dust in air	132
Fluoride in water	5
Lead in air	4
Miscellaneous	109
Total	438

OCCUPATIONAL HEALTH LABORATORIES ACTIVITIES JANUARY-DECEMBER 1960

Materials	Type Sample	Source	
Lead	Human Fluids	Doctors, hospitals, & industry	165
	Air	Industry & public health service	9
	Miscellaneous	Doctors & state agencies	6
Fluoride	Air	Industry	60
	Urine	Industrial hygiene personnel	11
	Water	Industry & state agencies	9
Dust	Air	Industry	132
Stippling & Hgb.	Blood	Industry	30
Mercury	Urine	Doctors	1
Free Silica	Settled Dust	Industry	2
		Total	425
Reagents, Blanks, Controls and Standards			365
		Total	790

TABLE 21

OCCUPATIONAL DISEASE REPORTS* JANUARY-DECEMBER 1960

Dermatitis		434
Agricultural chemicals	30	
Cement	71	
Citrus fruit	44	
Detergents	52	
Larva migrans	31	
Other	206	
Systemic Poisoning		128
Parathion	100	
Other	28	
Conjunctivitis		60
Welding	55	
Other	5	
Miscellaneous Diseases		31
Total		653

*Received through the Florida Industrial Commission.

RADIOLOGICAL HEALTH

At the direction of the State Health Officer, the division was assigned the responsibility for overall direction and coordination of all activities related to radiological health carried out by the State Board of Health.

Diagnostic x-rays currently constitute the largest single source of man-made radiation to which our population is exposed. Because of this and since no single diagnostic tool has proved to be of as much value as the use of x-ray equipment, it is of primary importance that measures be taken to eliminate all radiation exposure not necessary to diagnosis or treatment. The use of radioactive materials is growing in importance as evidenced by the 192 Atomic Energy Commission licenses currently held in the state and the 59 shipments of radium to Florida users during the past year.

The division is carrying out a number of programs directly, is participating in the planning of others and is assisting the Bureau of Laboratories in setting up a radiological laboratory for the State Board of Health.

SURVEY OF X-RAY FACILITIES

The program of radiation exposure control through inspections of x-ray equipment and facilities which was begun in 1959 was continued and expanded in 1960. Medical and dental x-ray surveys were made in Dade, Monroe, Broward, Hendry, Highlands, Palm Beach and Hillsborough Counties. These surveys were made at the request of local medical and dental societies, the Division of Hospitals and Nursing Homes of the State Board of Health, and individual hospitals and with cooperation of the county health departments. Organizing, scheduling and conducting the survey involved conferences with such groups as x-ray

servicemen in the Miami and Tampa-St. Petersburg areas, the Florida East Coast Section of the American Dental Association, the medical societies in each of the counties involved, the Florida Podiatric Association, the Tampa, Pinellas County and Ridge Veterinary Societies and the Florida Society for Non-Destructive Testing. A total of 699 x-ray facilities were examined and individual reports giving findings and recommendations were issued. Analysis of the data for Dade County was completed. The presence of specific items recommended for x-ray protection by the National Committee on Radiation Protection is shown in the accompanying figures.

Approximately 1 year following the initial survey a random sample of 50 facilities was revisited to determine the effectiveness of the survey program. During the revisit it was noted whether the previously issued recommendations had been carried out. The overall compliance with all the various recommendations was 29 per cent. This total compliance picture indicates a need for increased and more widespread educational efforts in the field of radiological health.

With the cooperation of the Dade County Department of Public Health, 11 shoe fitting fluoroscopes were found in operation in and around Miami. Letters were issued by the county health officer to each owner explaining that since other less hazardous methods of shoe fitting are available, it is recommended that use of the fluoroscope be discontinued.

INSPECTION OF OTHER RADIATION USERS

Members of the staff have continued to carry out inspections of radioisotope users in cooperation with the Inspection Division of the Atomic Energy Commission. Users of radioactive materials not covered by AEC licenses were visited and 2 large industrial x-ray facilities were inspected. In 1 of them an extensive survey was made before the facility was put into operation.

RADIATION SURVEILLANCE NETWORKS

Throughout the year high-volume air sampling devices and precipitation collectors were operated as a part of our continued participation in the nationwide study of air-borne contamination and natural background. Filters in the air sampler are changed daily, monitored for radioactivity and forwarded to the USPHS laboratory in Washington for more complete and subsequent study. Precipitation is collected and measured by approved meteorological procedures. The rain water samples were evaporated to dryness and forwarded to Washington for detailed study. This program involved the handling of 255 air samples of rain water.

The USPHS extended its national milk sampling program and included Florida as a state from which samples of consumer milk are taken. The division is cooperating in this program.

During the year the division organized a program of statewide surveillance of milk produced in Florida. Samples were collected monthly from randomly selected producers and were proportionally composited on a quarterly and geographic basis. The samples collected from April through September were analyzed for strontium-90 and cesium-137 by the USPHS while other samples are being stored for future analysis.

TABLE 22
SURVEILLANCE OF RADIOACTIVE MATERIALS

Medium	No. of Samples	Average Concentration			
		Gross Beta	Specific nuclides uuc/liter		
			Sr 89	Sr 90	Cs 137
Air	225	<.1 uuc/meter³	.....	.....	.....
Rainwater	120	<350 uuc/liter	.....	.....	.....
Consumer milk	2	.....	ND	4	83
Producer milk	6	.....	ND	4.8	70

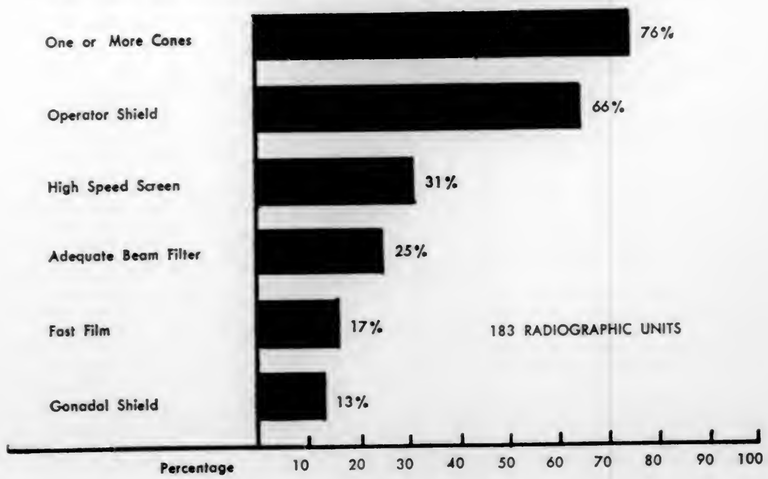
< = "less than"
ND = No detectible activity

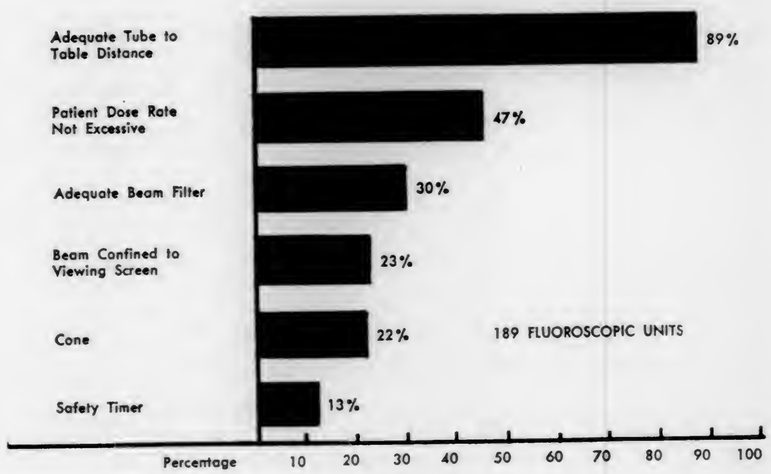
CONSULTATION AND REVIEW OF PROPOSED FACILITIES AND PROGRAMS

The division held consultations with intended users of radiation in order to call to their attention radiological safety considerations in their proposed programs. The plans for 5 proposed x-ray installations were reviewed by the division at the request of the Division of Hospitals and Nursing Homes.

FIGURE 6

RESULTS OF SURVEY OF X-RAY UNITS
PHYSICIANS OFFICES—DADE COUNTY—1960
(Per cent of units surveyed meeting NCRP recommendations)





PERSONNEL MONITORING SERVICE

The personnel monitoring service for state and county health department personnel potentially exposed to radiation was handled by this division. Film badges were issued to approximately 100 persons each month, which is a slight increase over last year.

A number of investigations were made of possible overexposures and recommendations were made for improvements in operating procedures and in the handling of the badges.

REGULATIONS

Proposed Regulations for the Control of Radiation Hazards were drawn up and approximately 100 copies of an advanced draft were submitted to interested professional, legal and administrative groups and individuals for comment.

OTHER RADIOLOGICAL HEALTH ACTIVITIES

Other services rendered by the division included recovery of radium lost by a hospital and investigation of film fogging due to contaminated packaging materials.

TABLE 23

SUMMARY OF MAJOR RADIOLOGICAL HEALTH ACTIVITIES

Surveys of x-ray installations	
Medical	180
Dental	514
Inspections of other radiation users	40
Consultation with intended users of radiation	5
X-ray facility plans reviewed	5
Film badges handled for state and county employees	1173

TRAINING AND RELATED ACTIVITIES

During the year 1960 training activities continued to be a prominent feature of the radiological and occupational health program. The Division of Sanitation increased the allotment of time to the radiological and occupational health portion of their training program from 1 to 2 and a half hours. The division participated in a workshop on radiological health for the Health Education Section of the Florida Public Health Association held in Orlando in July 1960 at which 30 health educators and other interested persons were present. With the assistance of the USPHS a 2-day course in occupational health was given on May 5 and 6, 1960. This course was designed for health officers and each was invited to bring

along his chief nurse and chief engineer or sanitarian. The attendance was 106.

The director of the division participated in 2 meetings of the National Committee on Radiation Protection. Papers describing the x-ray survey program were given at the annual meetings of the American Medical Association and the Radiological Society of North America. Various staff members received additional training by attending the International Industrial Ventilation Conference, the course in radiological health presented jointly by the State Board of Health and the USPHS in Tallahassee, and the Seventh Annual Seminar on Radiological Health. They attended information meetings devoted to the topics of nuclear powered vessels, nuclear electric power devices, radiation gauging devices, proposed Florida nuclear developments and laboratory facilities, instruments and services. The State Board of Health was represented at a meeting of the National Advisory Council on Radiation and at the Regional Advisory Council, Southern Governors' Conference. The division director represented the State Board of Health at the dedication of Florida nuclear reactors and accelerators and of the USPHS Southeastern Radiological Facility.

As a result of pollen studies done by this division in the past, requests for climatology and pollen information continued to be answered.

TABLE 24

SUMMARY OF RELATED ACTIVITIES

Lectures and training activities	18
Staff training	3
Meetings attended	15
Climatology letters answered	50
Literature distributed:	
Occupational health bulletins	140
Radiological health manuals	315
Pollen reports	31

DIVISION OF TUBERCULOSIS CONTROL

DWIGHT J. WHARTON, M.D.

Director

As long as new cases of tuberculosis are found and deaths continue to occur from this disease the basic problems of tuberculosis remain unchanged. Prevention of infection with its consequent disease and death is the goal of achievement. Discovery, isolation and treatment of each person having infectious tuberculosis, examination of his contacts and education of the public constitute the road to eradication of the disease.

As long as new infections occur continuation of this preventable

disease is assured. In an environment whose population is largely non-infected a single spreader of tubercle bacilli has opportunity to infect a larger number than when infection was prevalent and thus he becomes of increasing importance in a control program.

Various indices may be used to measure the incidence of tuberculosis. These may include total deaths, death rates, new case rates or tuberculin reactor rates. Whatever index is chosen the progressive trend toward eradication of this disease can be forecast but the horizon is not yet in view. Each newly infected child means the ultimate goal is postponed throughout the lifetime of that person. The cost of finding each new case becomes greater, the result more valuable.

MORTALITY

Table 25 shows the trend in the number and rate of deaths since 1920. Other data are considered of great importance in attempting to indicate progress. In 1950 the median age at death of those in Florida who died of tuberculosis was 47 years while in 1960 this had increased to 59 years. In 1950 there were 229 tuberculosis deaths before age 45, compared to 46 in 1960, while the population increased 79 per cent. This decrease in deaths in young people is extremely gratifying. In many instances the immediate cause of death in older individuals was due to impaired pulmonary function or heart failure and only indirectly due to tuberculosis. Many individuals have lived a normal life span and are recorded as tuberculosis deaths although they have shown no evidence of active disease for many years. The time of infection of these older persons was not recent and in many instances was as much as half a century ago. The number of deaths is no longer an index of prevelance of this disease in a population.

MORBIDITY

Reporting new active cases began in 1952 on a nationwide basis with continuation of reporting of total new cases. This additional record of the active cases is very logical and important since these are the spreaders of disease. They need isolation and treatment. New cases will be found among their contacts with much more frequency than among the contacts of inactive cases. However the new inactive cases add to the workload of the local health services not only by clinical, bacteriological and radiological follow-up of the inactive case but also by search for and follow-up of contacts. Reporting of these is also necessary.

If a good casefinding program has been in effect for several years the inactive cases found should be in smaller percentage as years go by. This is the case in Florida where approximately 75 per cent were new active cases in the 5 year period of 1954-1958 inclusive. The percentage of new active cases in 1959 was 80 per cent and in 1960 is 91 per cent.

In years past physicians have been credited with reporting new cases

only when the reporting notices came from their offices. Current instruction attempts to correct this by giving credit when the report is by telephone or any other method of communication. This year physicians are known to have reported 351 new cases, or 24.7 per cent of the total. Many individuals are told by physicians to report to the local health department and ask for a chest x-ray but there is no way to credit these to physician reporting. Where additional new cases are found as a result of contact examinations the physician is not given credit for his part. County health departments are urged to give physicians full credit for their part in case reporting.

Cases received by transfer from another state are reported separately in the same manner as last year. These cases have all been previously counted as new cases in another state.

	1959	*1960*
Newly reported cases of tuberculosis—		
Residents of Florida	1588	1423
Cases reported by transfer from out-of-state	260	299
	1989	1722

CASEFINDING

There has been no change in the operation of survey units. The effort to reach migrant field workers was less rewarding than in 1959 since freezing weather and heavy rains caused heavy damage to crops and fewer workers were needed. The number of survey x-rays of migrant field workers was 7944 compared to 26,409 in 1959 and 6705 in 1958. The yield of new cases has dropped each year due probably to the return to the same area of many migrants who have had previous survey x-rays. The yield in 1960 was 1 new case per 1986 films compared to 1 new case per 1258 films in 1959 and 1 per 610 films in 1958.

A total of 610,241 70mm films were done by state and local health departments. Of this number 440,526 were in counties having more than 100,000 population.

The Tuberculosis and Health Associations in several counties are expanding activities, particularly in the introduction of "Gray Lady" type of volunteer workers. One area of expansion has been to assist the school and health authorities in obtaining parental consent to do tuberculin testing. When prompt consent was not forthcoming a home visit was made with the result that parental consent rose from approximately 70 per cent to more than 95 per cent. Assistance is also being given in follow-up of x-ray survey work, helping with uncooperative patients and exploring ways to obtain x-rays on individuals who have not had such an examination in recent years.

Follow-up on survey films has been satisfactory. When the survey extends throughout the year approximately half of the survey work is done so late in the year that the follow-up is not complete. The U. S. Public Health Service and National Tuberculosis Association have jointly recommended that a follow-up is satisfactory which is 75 per cent complete by the end of 6 months from the end of the survey. Standards for completion of follow-up of individuals were prescribed and these standards will be used, beginning in 1961, and will reflect work more favorably. The Dade County Tuberculosis and Health Association and state unit # 5 surveys showed 99.7 per cent and 99.4 per cent completion respectively 6 months after the end of the year. The number of new cases credited to survey x-rays is significantly increased by use of this standard. In Table 28 the surveys with less than 6 months follow-up from the end of the survey are identified in the tabulation.

Three of the 5 units operated by this division have had new Odelca Cameras installed. These new units reduce radiation to the individual being examined by about 75 to 80 per cent. The film is of better quality requiring fewer retakes.

In considering the total number of survey films taken mention must be made of the large number of military and civilian personnel given such x-rays at military installations.

In 1959 local health departments reported 36,635 tuberculin tests and increased this to 59,486 in 1960. The reactor rate reflects a low infection rate and is a good index of the decreasing prevalence of spreaders of tuberculosis. School children in the first and second grades in many parts of the state show a reactor rate of less than 1 per cent for white children, and from 1.3 per cent to 2.6 per cent for colored children. In older individuals there is evidence that infection of white children has been on a low level for several years. In the ninth grade in Pasco County there was a reactor rate of 1.9 per cent in 359 pupils while 393 senior pupils in Lake showed only 1.0 per cent to react. Dairy workers, all but 1 white, in 3 southeastern counties were tested with no reactors in 78 workers age 23 years and younger. In a junior college all students were tested because of discovery of 1 active case and although all were contacts only 2.8 per cent of those under 20 years were reactors.

With colored children first and second grade pupils reactor rates this year were reported from 1.3 per cent to 2.6 per cent. In older colored students there was a 3.1 per cent reactor rate in 65 colored high school seniors in 1 rural county and a 22.2 per cent reactor in 36 ninth grade pupils in another county. The low rate for the early grades was quite constant in many counties and is quite gratifying. In general the number of older colored pupils tested is too few to give an accurate estimate. However, the reactor rate is considerably higher and reflects the high active disease rate in this race several years ago.

DIAGNOSTIC X-RAY SERVICES

A 14 x 17 portable x-ray unit continues to provide service to those county health departments without x-ray facilities. The schedule is so arranged that the intervals between visits is no longer than 3 months. This service is primarily for follow-up of known cases and for examination of contacts of active cases and those suspected of having disease. The films are processed and read in this division.

ACTIVITIES IN COUNTY HEALTH DEPARTMENTS

There has been no change in the policy inaugurated in 1955 of supplying INH and PAS to patients after discharge from hospital treatment. Long-term chemotherapy is recommended and a large majority of the patients cooperate in meeting this objective. Primary tuberculosis in children is treated at home in most instances with hospitalization when there is serious illness or complications, or when home conditions are not adequate to insure satisfactory treatment.

The increasing interest in tuberculin testing has been mentioned. The 59,486 tests done this year show a very favorable comparison to the 15,900 tests in 1955 and 36,635 in 1959. The follow-up has also been very satisfactory in seeking out and studying those whose survey x-ray films showed possibility of tuberculosis. In most instances each county has met or exceeded the USPHS-NTA standards of performance.

TUBERCULOSIS HOSPITALS

The State Tuberculosis Board continues to operate 3 modern well-equipped hospitals with total capacity of 1446 beds. Throughout the year the census showed a slow but steady decline from 1276 patients at the beginning to 1164 at the end of December. The closing of the Orlando hospital in late 1959 caused no more than minimal inconvenience in the hospitalization of newly discovered patients.

Many patients elect to receive care in Veterans Administration hospitals. Three VA hospitals in Florida have a total of 95 beds for tuberculosis patients. These hospitals transfer patients to Oteen, North Carolina and other VA hospitals for long-term treatment. A review of the case register (at the end of the year) shows Florida had 174 patients in VA hospitals over the country and 61 in other hospitals.

CENTRAL TUBERCULOSIS CASE REGISTER

Division of the Central Case Register into 2 sections is continued, with the main register for cases caused by M. tuberculosis and a second register for individuals showing disease presumably due to unclassified mycobacteria or individuals having had isolation of these organisms from their sputum or other body fluids. This division was made primarily to augment research in the area of unclassified mycobacteria but it serves to assist in following these individuals whose disease is so much like tuberculosis, but yet so different.

The Central Case Register depends largely on information obtained from local health services. To maintain the register as accurately as possible requires constant correspondence with local health services, private physicians, hospitals and institutions. Table 30 shows an analysis of the Central Case Register at the end of the year with comparative data for the preceding 4 years. Table 29 shows an analysis of cases in the register by counties.

A large percentage of the cases are easily followed after discharge from a hospital but as years go by an increasing number are more difficult to follow. Some of the "active" cases date back many years and a considerable number go back to the 1940's. These are "active" because a cavity is present and most cases will remain active for life. Some of these long-standing cases become progressively less cooperative as the years go by so that an x-ray and/or sputum study is difficult to obtain. Between 500 and 600 "active" patients are discharged from the State Tuberculosis Hospitals each year, and still more are received by transfer from other states and from VA hospitals. It takes little imagination to realize that were it not for much effort by the case register personnel of the county health departments and State Board of Health the number of active cases would assume enormous numerical proportions. The number of active cases at home is 1224 and of these only 281 had neither x-ray nor sputum examination.

Cases inactive 5 years and primary tuberculosis inactive 2 years are removed from the case register and are followed on a voluntary basis with recommendation for annual x-rays for those from puberty on.

Articles by staff members:

Flipse, M. E., Wharton, D. J. Challenge of tuberculosis. J. Florida M. Asso. 46:846-47, Jan. 1960.

SPECIAL PROJECT REPORT

The Epidemiology of the Unclassified Mycobacteria

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Research Epidemiologist

These special studies supported by an NIH grant have continued in a multitangent approach to the early elucidation of the epidemiology of unclassified (atypical) mycobacterial infections. An objective of high priority during 1960 was the concerted and concentrated collection of field data regarding the human-to-human transmissibility of these organisms.

A preliminary sample of cases with pulmonary disease exhibiting secure evidence of a cause-effect relationship with the non-photochromogenic (Group III) variety of unclassified mycobacteria (a fact found in approximately 38 per cent of all Florida persons from whom unclassified organisms were isolated) was interviewed and their household contacts tested with the homologous tuberculin, roentgenograms and bacteriologic culture of their sputa. Of the contacts tested with PPD-B (tuberculin prepared from the Battey strain non-photochromogen), 20.9 per cent exhibited positive reactions. In no instance was the identical type bacterium isolated from a household contact, and not in a single family was there uncovered a second case of disease due to these organisms.

However, before we can assert with any degree of certainty that indeed these infections are not contagious, comparable measurements must be made on the "normal" population. Considerable time was spent

during 1960 in devising and pretesting in the field methods for obtaining these "control" measurements. A medical student assigned to this project spent a major proportion of his summer evaluating these procedures. Control data collection was well under way at the end of 1960 and material sufficient to allow basic conclusions should be available by mid-1961.

Very useful epidemiologic facts related to the problem of contagion, as well as other factors, are obtainable through mass tuberculin surveys. These "tuberculosis surveys" begun on a pilot basis last year were extended to multiple age groups in selected areas of the state during 1960. Approximately 2500 individuals representing all age groups above 6 years in 6 counties were tested with both PPD-B and PPD-S (Standard tuberculin). On the average, the colored race exhibited reaction rates to PPD-B approximately 5 times that of the white, and both races showed as much as a 12-fold greater reaction rate to PPD-B than to PPD-S. In general, it would appear that PPD-B sensitivity is acquired early in life and the proportion of the population sensitive rises rapidly with age.

Of special interest was the combined tuberculin-sputum-x-ray survey among dairy workers in Martin and Okeechobee Counties. Of the 334 individuals (all adults) tested with the 2 tuberculins, 20 (6.0 per cent) were positive to PPD-S and 24 (7.2 per cent) to PPD-B. No acid-fast organisms were isolated from the 338 submitting specimens and only 1 of the 373 x-rayed demonstrated evidence of tuberculosis. This individual was a known case under regular follow-up of the county health department.

Follow-up studies of positive reactors and the examination of their contacts with tuberculin tests, sputum cultures and chest x-rays, showed a definite family clustering of persons reacting to PPD-B; but the overall rate among the families of PPD-B reactors was significantly less than the PPD-S rate among the households of PPD-S reactors. It is believed that these figures suggest an extra-human common source of the allergen.

The Central Atypical Registry continued to function actively during 1960. The routine inflow of data from the state laboratories, state tuberculosis hospitals and field investigations was supplemented this year by the completion of a brief clinico-epidemiologic questionnaire which was submitted to the attending physician at the time of the positive report on each new case.

Incomplete morbidity statistics show that during 1960 these organisms were isolated from 618 persons. The non-photochromogenic (Group III) variety continued to be the predominant type with 304 patient strains. More uniform referral by the various laboratories resulted in a greater proportion of the supposedly less-pathogenic Groups II and IV (27.3 per cent and 13.8 per cent, respectively) than was seen in previous years.

All of the evidence presently available indicates that infection with the Group III unclassified mycobacteria is a relatively common event, probably occurs early in life, is associated with rural dwellers and is rather uncommonly associated with pulmonary disease. If clinical disease

is found in association with these organisms it appears selective for the elderly male with a rural background. The risk is somewhat greater for the Negro. The source of these bacteria is still undetermined; however, there is a growing body of evidence to suggest that rarely, if at all, are they transmitted from infected persons to their associates.

In April 1960, a Florida Conference on Atypical Mycobacterial Infections was held at the Southwest Florida Tuberculosis Hospital in Tampa. More than 25 scientists representing neighboring states and national agencies attended the 2-day meeting. In addition, the Florida studies were presented at the Mycobacterial Symposium of the American Public Health Association in San Francisco; a meeting to which the Florida group was an invited participant.

During the year 3 formal reports of accumulated data were presented at state and national meetings. Several informal talks were given to various lay, civic and professional groups. So that the health officers might be kept abreast of significant developments, periodic informational memoranda were distributed.

Articles by staff members:

Prather, E. C., Bond, J. O. Hartwig, E. C., Dunbar, F. P. Preliminary Report: Epidemiology of Infections due to the Atypical Acid-fast Bacilli. Dis. of the Chest. In press.

Prather, E. C. The Atypical Acid-fast Bacilli in Florida: Observations on their Epidemiology. J. Florida M. Asso. In press.

TABLE 25
TUBERCULOSIS CASES REPORTED—CASE RATES, DEATH AND DEATH RATES BY COLOR, SELECTED YEARS PER 100,000 POPULATION 1920 - 1960

YEAR	Cases Reported	Case Rate	TOTAL DEATHS		WHITE		NONWHITE	
			Deaths	Rate	Deaths	Rate	Deaths	Rate
1960	1,423	28.7	206	4.2	128	3.2	78	8.3
1959	1,588	34.4	233	4.9	161	4.3	65	7.4
1958	2,226	50.0	287	6.4	193	5.4	94	11.1
1957	2,414	56.8	257	6.0	165	4.8	92	11.5
1956	2,453	62.9	244	6.3	156	4.9	88	12.0
1955	2,253	61.8	281	7.7	175	6.0	106	14.6
1954	2,461	70.7	283	8.1	159	5.7	124	18.1
1953	2,424	77.9	303	9.7	171	6.9	132	20.7
1952	2,603	86.6	501	16.7	250	10.5	251	40.0
1951	2,590	89.3	518	17.9	279	12.2	239	38.7
1950	2,337	83.6	522	18.7	254	11.6	268	44.1
1945	**	**	708	31.1	339	19.7	369	66.2
1940	**	**	973	50.8	375	26.8	598	115.6
1935	**	**	908	56.0	395	34.3	513	109.4
1930	**	**	1,015	68.6	432	41.3	583	134.0
1925	**	**	999	80.8	426	50.0	573	148.7
1920	**	**	1,016	102.3	423	64.3	593	176.8

*Preliminary Data
**Data not comparable

TABLE 26

NUMBER AND PERCENTAGE OF REPORTED TUBERCULOSIS CASES BY STAGE OF DISEASE, RACE AND SEX, AGE, AND SOURCE OF REPORT, FLORIDA 1959 - 1960

Stage of Disease, Race and Sex, Age, and Source of Report	1960		1959	
	Cases	Percent	Cases	Percent
TOTAL CASES	1,423	100.	1,588	100.
STAGE OF DISEASE				
Primary	84	5.9	75	4.7
Minimal	224	15.7	235	14.8
Moderately advanced	536	37.7	518	32.6
Far advanced	441	31.0	518	32.6
Non-pulmonary	60	4.2	78	4.9
Unknown	78	5.5	164	10.4
ACTIVITY				
Active	1,295	91.0	1,271	80.0
Inactive	128	9.0	817	20.0
RACE AND SEX				
White male	635	44.6	743	46.8
White female	280	19.7	278	17.5
Colored male	313	22.0	358	22.6
Colored female	191	13.4	202	12.7
Unknown	4	0.3	7	0.4
AGE				
Under 5	57	4.0	64	4.0
5-14	45	3.1	44	2.8
15-24	113	8.0	117	7.4
25-44	482	33.9	561	35.3
45-64	474	33.3	514	32.4
65 Plus	237	16.7	271	17.0
Unknown	15	1.0	17	1.1
SOURCE OF REPORT				
Health department	644	45.3	971	61.1
Sanatoria	264	18.5	421	26.5
Private physicians	351	24.7	30	1.9
General hospitals	20	1.4	3	0.2
Death certificates	31	2.2	52	3.3
Veteran's hospitals	67	4.7	95	6.0
Florida state prisons	12	0.8	12	0.8
Florida state hospitals	26	1.8	2	0.1
Other	8	0.6	2	0.1

TABLE 27

RESULTS OF ALL 70mm X-RAY SCREENINGS AND 14" x 17" FOLLOW-UP FILMS BY COUNTY, FLORIDA, 1960

| SURVEY UNIT | 70mm X-RAYS | | | 14-in. x 17-in. X-RAY FOLLOW-UP FILMS | | | |

TABLE 27 (Continued)

RESULTS OF ALL 70mm X-RAY SCREENINGS AND 14" x 17" FOLLOW-UP FILMS BY COUNTY, FLORIDA, 1960

SURVEY UNIT	70mm X-RAYS			14-in. x 17-in. X-RAY FOLLOW-UP FILMS										ALL FILMS		
				FINDINGS				NEW CASES FOUND								
								By Stage				By Activity				
	Total Films	Percent of Pop. 18 Yrs. and over	Definite or Suspected Tuberculosis	Percent Follow-up	New Cases	Old Cases	Diagnosis Reserved and Suspected Tuberculosis	Minimal	Moderately Advanced	Far Advanced	Unknown	Active and Prob. Active	Inactive and Prob. Inactive	Tumor	Cardiovascular	Other Pathology
Martin Co. Mass Survey	493	4.3	8	12.5*	0	0	1	...	...	...	...	...	...	2	6	1
Okaloosa Co. Mass Survey	5,901	14.1	44	61.4*	0	2	4	...	...	...	...	...	...	4	28	56
Okeechobee Co. Mass Survey	712	16.3	5	80.0*	0	2	0	...	...	...	...	...	...	1	4	3
Orange Co. Health Dept.	18,061	10.0	119	95.0**	11	30	1	2	3	0	6	9	2	21	36	71
Osceola Co. Mass Survey	2,057	15.8	46	87.0	0	6	8	...	...	...	...	...	...	6	14	21
Palm Beach Co. Mass Survey	28,058	17.5	318	63.5**	5	26	46	2	1	2	0	4	1	66	130	227
Palm Beach Co. Health Dept.	11,723	7.3	82	82.9**	5	9	7	1	0	4	0	5	0	20	33	61
Pasco Co. Mass Survey	111	0.4	2	100.0	0	1	0	0	0	0	0	0	0	0	0	0
Pinellas Co. Health Dept.	28,250	9.9	273	76.9**	4	32	23	0	1	3	0	4	0	37	73	122
Polk Co. Health Dept.	25,569	20.4	189	94.7**	18	11	41	6	6	1	5	15	3	47	122	158
Santa Rosa Co. Mass Survey	3,731	18.4	23	17.4*	1	1	0	0	1	0	0	1	0	8	21	19
Sarasota Co. Mass Survey	12,752	23.0	146	92.5	0	24	19	0	0	0	0	0	0	27	50	155
Sarasota Co. Health Dept.	15,901	28.7	175	81.1**	2	23	31	0	0	1	1	2	0	32	64	100
Seminole Co. Mass Survey	5,744	15.7	30	63.3*	0	4	8	0	0	0	0	0	0	12	33	36
Taylor Co. Mass Survey	2,494	28.0	12	58.3*	0	0	4	0	0	0	0	0	0	2	21	15
Union Co. Mass Survey	684	17.0	6	100.0*	0	1	1	0	0	0	0	0	0	1	5	8
Union Co. Fla. State Prison	2,089	66.0	27	100.0*	1	8	3	1	0	0	0	1	0	2	6	27
Volusia Co. Mass Survey	21,734	23.9	119	72.3*	1	13	30	0	0	0	1	1	0	48	155	155
Walton Co. Mass Survey	2,882	22.4	11	72.7*	0	0	8	0	0	0	0	0	0	3	16	8
Washington Co. Mass Survey	1,458	19.1	11	100.0*	0	1	3	0	0	0	0	0	0	3	5	10

*Follow-up period less than 6 months
**Approximately 50% (follow-up period less than 6 months)

TABLE 28

RACE, SEX, AND AGE DISTRIBUTION OF RESULTS OF THE MASS SURVEY X-RAY SCREENINGS WITH 14" X 17" FOLLOW-UP, FLORIDA, 1960

	Total	Race and Sex					Age						
		White		Nonwhite		Un-known	18-24	25-34	35-44	45-54	55-64	65 and over	Un-known
		Male	Female	Male	Female								
70mm Films													
Total Films*	252,350	95,712	101,341	26,816	23,456	5,025	34,827	48,588	54,553	48,441	34,688	28,723	2,530
Definite or Suspected Tuberculosis	2,206	1,100	700	256	120	30	73	135	287	460	570	759	22
14"x17" Films													
New Cases	47	21	7	13	5	1	5	7	17	8	3	7	0
Old Cases	210	113	55	29	11	2	4	12	29	43	49	71	2
Diagnosis Reserved and Suspicious Tbc.	355	179	101	39	25	11	13	28	51	69	71	121	2
New Cases by Stage													
Minimal	11	5	1	1	4	0	2	3	5	0	0	1	...
Moderately Advanced	15	8	2	4	1	0	1	1	8	1	2	2	...
Far Advanced	16	7	1	7	0	1	2	2	3	7	0	2	...
Unknown	5	1	3	1	0	0	0	1	1	0	1	2	...
New Cases by Activity													
Active & Prob. Active	43	21	5	12	4	1	4	6	16	8	2	7	...
Inactive & Prob. Inactive	4	0	2	1	1	0	1	1	1	0	1	0	...
New case rate per 100,000 satisfactory 70mm films	18.6	21.9	6.9	48.5	21.3	19.9	14.4	14.4	31.2	16.5	8.6	24.4	...

*Excludes unsatisfactory films. Distribution by age, race and sex based on a 10% sample of film.

TABLE 29

ANALYSIS OF CASES IN THE CENTRAL TUBERCULOSIS CASE REGISTER—1960

COUNTY	Total Cases	Pulmonary Tuberculosis				Non-Pulmonary	Active Cases			
								At Home by Sputum Status		
		Active	Questionably Active	Inactive	Primary		In Hospital	Positive	Negative	None 1960
STATE	10,135	2,623	207	6,851	264	190	1,399	198	605	421
Alachua	170	41	.....	118	8	3	22	1	9	9
Baker	15	4	.....	10	.....	.....	3	.....	1	1
Bay	88	24	1	63	.....	.....	20	1	1	2
Bradford	40	13	.....	26	.....	1	9	.....	4	.....
Brevard	134	31	2	94	4	3	17	2	8	4
Broward	501	134	8	337	20	3	65	13	38	17
Calhoun	22	5	1	16	.....	.....	4	.....	.....	1
Charlotte	23	4	.....	19	.....	.....	2	.....	1	1
Citrus	11	5	.....	5	.....	1	2	.....	3	.....
Clay	31	12	.....	17	2	.....	3	.....	6	3
Collier	57	16	1	27	13	.....	11	2	.....	3
Columbia	74	23	.....	50	.....	1	17	.....	4	2
Dade	1,871	459	42	1,257	45	68	282	38	79	60
DeSoto	19	6	.....	13	.....	.....	3	.....	2	1
Dixie	9	4	.....	5	.....	.....	.....	.....	1	3
Duval	1,216	299	8	862	26	21	176	15	85	23
Escambia	344	69	4	260	5	6	54	5	4	6
Flagler	14	2	.....	12	.....	.....	1	.....	1	.....
Franklin	14	4	.....	10	.....	.....	1	.....	2	1
Gadsden	89	21	1	63	3	1	10	.....	4	7
Gilchrist	4	1	.....	3	.....	.....	1	.....	.....	.....
Glades	5	.....	.....	5	.....	.....	.....	.....	.....	.....
Gulf	24	4	1	19	.....	.....	4	.....	.....	.....
Hamilton	35	15	.....	20	.....	.....	6	.....	3	6
Hardee	21	8	.....	12	1	.....	3	1	2	2
Hendry	15	6	.....	9	.....	.....	2	.....	3	1
Hernando	23	6	1	15	1	.....	4	.....	1	1
Highlands	65	22	3	34	2	4	9	1	.....	12
Hillsborough	916	242	47	595	19	13	137	21	36	48
Holmes	18	7	2	8	1	.....	2	1	.....	4
Indian River	45	10	1	32	1	1	7	1	1	1
Jackson	105	22	2	79	1	1	9	1	4	8
Jefferson	13	2	.....	11	.....	.....	2	.....	.....	.....
Lafayette	5	2	.....	3	.....	.....	1	.....	.....	1
Lake	137	37	4	91	1	4	14	2	14	7
Lee	87	24	.....	61	2	.....	14	.....	6	4
Leon	180	37	1	128	8	6	27	1	6	3
Levy	25	7	.....	16	1	1	2	1	1	3
Liberty	9	3	1	5	.....	.....	.....	.....	.....	3
Madison	38	6	.....	27	3	2	2	.....	2	2
Manatee	103	35	1	65	.....	2	19	4	10	2
Marion	90	29	1	59	1	.....	14	2	7	6
Martin	59	13	2	40	1	3	7	.....	3	3
Monroe	75	22	1	48	3	1	9	1	6	6
Nassau	47	6	2	35	.....	4	2	1	1	2
Okaloosa	79	17	4	54	1	3	7	.....	4	6
Okeechobee	21	6	1	11	3	.....	2	.....	3	1
Orange	434	98	5	320	6	5	52	13	27	6
Osceola	50	16	3	31	.....	.....	5	.....	5	6
Palm Beach	537	148	7	348	27	7	81	6	48	13
Pasco	37	13	1	21	2	.....	3	1	6	3
Pinellas	593	176	15	386	5	11	73	32	40	31
Polk	496	132	12	324	21	7	51	8	45	28
Putnam	96	21	4	67	3	1	6	.....	7	8
St. Johns	85	30	.....	52	1	2	13	1	3	13
St. Lucie	101	21	2	72	5	1	12	2	4	3
Santa Rosa	45	11	1	33	.....	.....	6	1	2	2
Sarasota	102	22	1	74	4	1	9	3	5	5
Seminole	108	33	1	70	4	.....	13	7	9	4
Sumter	19	7	.....	9	3	.....	1	.....	5	1
Suwannee	46	13	2	31	.....	.....	3	.....	6	4
Taylor	29	7	2	20	.....	.....	3	.....	1	3
Union	12	4	1	7	.....	.....	.....	.....	1	3
Volusia	234	60	6	161	5	2	26	7	21	6
Wakulla	13	5	1	7	.....	.....	4	.....	.....	1
Walton	35	8	.....	25	2	.....	2	1	3	2
Washington	29	13	.....	16	.....	.....	8	1	1	3
Fla. St. Prison	48	20	.....	28	.....	.....	20	.....	.....	.....

TABLE 30

COMPARISON OF TUBERCULOSIS CASE REGISTER STATISTICS, FLORIDA 1956 - 1960

Tuberculosis Cases by Activity, Location and Sputum Status	Number of Cases					Percent Distribution				
	1960	1959	1958	1957	1956	1960	1959	1958	1957	1956
TOTAL CASES IN REGISTER	10,135	10,918	12,404	12,758	11,893	100.	100.	100.	100.	100.
Active pulmonary	2,623	2,942	3,250	3,832	3,875	25.9	27.0	26.2	30.0	32.6
Questionably active	207	299	419	627	688	2.0	2.7	3.4	4.9	5.8
Inactive pulmonary	6,851	7,225	8,307	7,944	7,048	67.6	66.2	67.0	62.3	59.2
Primary	264	261	250	181	163	2.6	2.4	2.0	1.4	1.4
Non pulmonary	190	191	178	174	119	1.9	1.7	1.4	1.4	1.0
ACTIVE PULMONARY	2,623	2,942	3,250	3,832	3,875	100.	100.	100.	100.	100.
Hospitalized	1,399	1,517	1,750	1,930	2,022	53.3	51.6	53.9	50.4	52.2
At home	1,224	1,425	1,500	1,902	1,853	46.7	48.4	46.1	49.6	47.8
ACTIVE CASES AT HOME	1,224	1,425	1,500	1,902	1,853	100.	100.	100.	100.	100.
Positive sputum	198	238	259	390	394	16.2	16.7	17.3	20.5	21.3
Negative sputum	605	651	726	683	856	49.4	45.7	48.4	36.0	46.2
Undetermined sputum*	421	536	515	829	603	34.4	37.6	34.3	43.5	32.5

*Sputum examinations were not reported on 421 active cases at home although 140 of these had one or more x-ray examinations.

DIVISION OF VETERINARY PUBLIC HEALTH

J. E. SCATTERDAY, D.V.M.
Director

The relation of animal diseases to human health is more comprehensive than was previously thought. Some 49 diseases transmitted from animals to man have been reported in the southern United States.

The division is responsible for those specialized activities related to the control of those animal diseases which are transmitted to man either by contact, or indirectly through food products of animal origin, or by arthropod vectors. Activities designed to eradicate or control those animal diseases are planned, supervised and coordinated.

A summary of the activities of this division in 1960 is as follows:

Anthrax—This disease has not been diagnosed in Florida since 1954. However, practicing veterinarians in those areas where the disease was previously present continue to submit suspicious specimens to the laboratory.

Brucellosis—three human cases were reported during the past year. Six thousand and forty-five herds of cattle were blood tested, 7962 reactors were found and disposed of and 105,806 calves were vaccinated with brucellosis vaccine. On May 1, 1960 all dairy herds in the state converted from Plan *D* (herds having adult vaccinates in them) to Plan *E* (all animals negative to the blood test, or milk ring test negative in the herd). The brucellosis milk ring test has been substituted for the brucellosis blood test for all practicable purposes, thus enabling a more frequent test on all dairies. This brucellosis ring test is made on each raw milk sample collected by the state and county health department sanitarians. This ring test sample for brucellosis is obtained in the routine collection of milk samples for other laboratory tests.

Bovine Tuberculosis—Three thousand and ninty-one herds consisting of 260,056 cattle were tuberculin tested and 446 reactors were found and disposed of by practicing veterinarians and federal and state employees. There was an increase of infected premises over the preceeding year. This represents an increase each year since 1956, as shown by the following table.

TABLE 31

Year	Herds	Cattle Tested	TB Reactors	Infected Premises
1956	2421	120,560	34	5
1957	2556	147,098	485	15
1958	3267	190,074	418	29
1959	2949	220,055	477	45
1960	3091	260,056	446	112

The Florida Livestock Board, U. S. Department of Agriculture, Florida State Board of Health and Florida dairymen are greatly concerned over this increase. The Florida Livestock Board was requested by the dairy industry to take steps to protect the Florida cattlemen, especially on dairies, and on November 18, 1960, the Livestock Board adopted the regulation that all cattle imported into the state for dairy purposes are subject to retest for both tuberculosis and brucellosis after importation, even though they are required to show evidence that they have been tested and found negative to those diseases in the state of origin.

Eastern Equine Encephalomyelitis—Forty-one cases in horses were reported. The incidence by county and month is reported on Table 32. One human case was laboratory confirmed.

Leptospirosis—This is a common disease of cattle, swine and dogs, as well as rodents. Eight hundred and sixty-four cattle, 3 swine and 518 dogs were reported for 1960, and 14 human cases were diagnosed and laboratory confirmed. An epidemiological follow-up was attempted on each human case to determine if possible the animal reservoir of these infections.

Mycotic and Parasitic infections are possibly the most prevalent of the zoonoses. Ringworm, a mycotic infection of animals and man, was reported by veterinarians in 247 dogs, 105 cats and 7 horses. At Christmas time 1 pet shop sold several litters of domestic kittens as gifts for children. From this 1 shop 5 families have reported infection with ringworm.

Hookworm—(*Ancylostoma braziliense* and *Acylostoma caninum*) is not a reportable disease in animals, but is known to be widespread in the dogs and cats of Florida. It is estimated that the infection rate may run even higher than 70 per cent in young dogs and cats. Creeping eruption, caused by contact with the larva of these dog and cat parasites, remain a most common dermatitis of children, utility workers and gardeners.

Rabies—There were 36 positive laboratory confirmed cases of rabies and 1 clinical case in a cow reported in 1960. The 37 cases involved 6 species (Table 33). No human cases were reported although 403 people received anti-rabies treatment. Three hundred and eighty-eight persons were treated with the brain tissue vaccine, and 15 with the duck embryo vaccine. Only 1 reaction to either treatment was reported. This child was treated with the Semple type vaccine. Of the 403 people treated, only 19 had proven exposure as shown below:

Biting Animal:	*3 Dogs*	*22 Raccoons*	*1 Fox*	*6 Cats*	*4 Bats*
Exposures:	2 humans 9 dogs	10 humans 7 groups of dogs	1 cow	6 humans	1 human cats

Of the rabid dogs reported in 1960, 2 had a history of fighting with raccoons. Of the 6 cats, 2 had known exposure to raccoons. Again, it is noted that the rabid cats all attacked and exposed humans, and that of

the 22 raccoons, investigation indicates that 16 of them exposed either man, dogs or cats.

Rabies was diagnosed and laboratory confirmed in 18 counties. With the exception of 3 counties: Santa Rosa (fox), Jefferson (cow) and Alachua (coon), all were in the peninsula as indicated by Table 33.

The evaluation of rabies diagnosis by the fluorescent antibody method continued in 1960 and now is being used in the routine laboratory diagnostic procedure. This had proven to be an extremely useful tool in the hands of the diagnostic group.

BIOLOGIST'S REPORT

W. L. JENNINGS, Ph.D.

For the first time since 1952 there was no epizootic rabies among gray foxes along the Georgia-Alabama boundaries, although fox population levels were dangerously high in several counties.

An attempt to control a rabies outbreak among the raccoons on the densely settled keys of Sarasota County was apparently successful. This was the first attempt in Florida to control raccoon rabies by raccoon population reduction. Although effective in this instance, it clearly demonstrated how expensive such work can be in time and labor, and how inadequate are the conventional methods available for raccoon control.

The search for a hidden rabies reservoir among species other than insectivorous bats continued, and was largely supported by a research grant from the National Institutes of Health. Regular collections of bats, examination of those submitted after contact with humans, showed that bats continue to harbor virus and are a potential source for infecting other animals.

Data on life history, ecology and virus activity in raccoons are being processed. It is hoped that these will elucidate the role of this animal in the rabies reservoir-vector pattern in Florida.

During the 5 months period, June 1 through October 30, the division supervised a study of Eastern Equine Encephalomyelitis among birds and mosquitoes in Pinellas County. This was carried out by the Florida State Board of Health, Pinellas County Health Department and the Communicable Disease Center. Using the method of Stamm, Davis and Robbins ("A Method of Studying Wild Bird Populations by Mist-Netting and Banding,"; Stamm, Donald D., Davis, David E., and Robbins, Chandler S.) 885 wild birds were captured, banded and bled (from the external jugular) during this period. The species captured included green heron (1), yellow-billed cuckoo (34), chuck-wills'-widow (1), belted kingfisher (2), flicker (6), red-bellied woodpecker (12), downy woodpecker (11), crested flycatcher (34), phoebe (4), acadian flycatcher (2), bluejay (112), tufted titmouse (1), Carolina wren (70), mockingbird (27), catbird (61), brown thrasher (4), wood thrush (3), olive-backed thrush (6), gray-cheeked thrush (1), veery (7), loggerhead shrike (2), white-eyed vireo (17), blue-headed vireo (1), red-eyed vireo (13), black and white warbler (9), prothonotary warbler (11), Swainson's warbler (1), Nashville warbler (1), parula warbler (2), magnolia warbler (2), palm warbler (17), oven-bird (7), northern water-thrush (1), Louisiana water-thrush (14), yellow throat (2), hooded warbler (2), redstart (1), house sparrow (12), red-wing blackbird (136), Baltimore oriole (1), rusty blackbird (1), common grackle (64), summer tanager (4), cardinal (165), towhee (6), field sparrow (1).

Satisfactory blood specimens were collected from 628 birds, and are now being processed. Light trap catches of mosquitoes were low during this period due to prevailing dry weather conditions and later on by excessive rain. On several occasions, the catch ran only 2-6 mosquitoes per trap, per night. However, 11,505 mosquitoes of 8 major species were divided into 530 pools and inoculated into baby chicks. No Eastern Equine Encephalomyelitis, Western Encephalomyelitis, or Venezualan Equine Encephalomyelitis virus was disclosed by this method, but the mosquito pools will also be injected into baby mice which should show St. Louis Equine Encephalomyelitis or other viruses if present.

MILK SANITATION SECTION

S. O. NOLES, B.S., M.P.H.
LEWIS W. WILLIS, B.S., M.P.H.

During 1960 the dairy industry in Florida made major changes both in production and processing methods. Automation of these operations is constantly creating new problems. Considerable time in the field was devoted to solution of such problems.

An extensive educational campaign was launched, and is continuing, in the detection and prevention of insecticides in milk. This has been a cooperative effort on the part of the Dairy Extension Division of the University of Florida, the State Board of Health, county health departments and the dairy industry. The Communicable Disease Center of the U. S. Public Health Service held an excellent short course and provided information to be used in the educational work. Representatives from the above 4 groups attended this course.

Further efforts have also been expended to eliminate the presence of antibiotics in milk. The consultants have been active at both local and national levels in this phase. Realizing that the presence of antibiotics is closely associated with the problem of mastitis infection in the producing herds, efforts are being made to develop and emphasize a continuous practical preventive Mastitis Control Program. The presence of antibiotics in market milk in Florida is practically non-existent. Close surveillance continues in this field through continuous education and by routine

sampling and testing of all milk in our laboratories. Immediate follow-up and corrective measures are made if a positive inhibitor test is found.

In cooperation with the Division of Radiological and Occupational Health and the Bureau of Laboratories, a program of sampling producing dairies statewide has been set up, testing for the presence of radioactive elements in the raw milk. Samples of finished products are also being collected, regardless of source of production, for the same purpose. This is a long range program and is planned to continue for a period of years.

In addition to dealing with specific problems, the milk consultants continued to collect and disseminate pertinent information on all phases of control programs. Because of the statewide distribution of milk and dairy products, uniformity of milk control is more imperative than in any other phase of food control. Only through efforts of a central agency working in close cooperation with personnel of county health departments, other agencies concerned, such as the dairy division and the livestock division of the State Department of Agriculture, and with organized industry groups, can this uniformity be continued and improved.

TABLE 32

REPORTED EASTERN EQUINE ENCEPHALOMYELITIS IN HORSES FLORIDA, 1960 BY MONTH, BY COUNTY

COUNTY	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Baker							1						1
Brevard								1			2		2
Broward								1					1
Charlotte				1									1
Dade					1								1
Duval					2			1	1				4
Gilchrist		3				1							4
Hillsborough					1		6	2	1				10
Jackson							2						2
Lake					1								1
Leon								1					1
Madison								1					1
Manatee								1		1			2
Orange								1					1
Palm Beach											1		1
Pasco						2	3	1					6
Polk										1			1
Volusia								1					1
Total		3		1	5	3	12	10	2	2	3		41

*One (1) human case of EEE Laboratory Confirmed.

TABLE 33

NUMBER OF CASES OF ANIMAL RABIES BY COUNTY, SPECIES AND MONTH — YEAR 1960

COUNTY & SPECIES	Dog	Cat	Fox	Raccoon	Cattle	Bat	Totals
TOTALS	3	6	1	22	1	4	37
Alachua				1			1
Brevard				3			3
Charlotte	1	1					2
DeSoto		1		2			3
Hardee				3			3
Hendry				1			1
Highlands				2		3	5
Hillsborough		1		1			2
Jefferson					1		1
Lee				1		1	2
Okeechobee	1			2			3
Osceola				1			1
Palm Beach				1			1
Pinellas		1		1			2
Polk	1	1		1			3
St. Lucie		1					1
Santa Rosa			1				1
Sarasota				2			2
MONTH							
January		1					1
February				1			1
March	0	0	0	0	0	0	0
April		1	1		1		3
May	1	1		2			4
June				2			2
July		1		2			3
August	1	1		2		3	7
September				4		1	5
October		1		6			7
November	1			2			3
December				1			1
TOTALS	3	6	1	22	1	4	37

TABLE 34

NINETEEN-YEAR SUMMARY ANIMAL AND HUMAN RABIES 1942 - 1960

Year	Positive Heads	Human Deaths	Humans Treated*
1942	211	1—Duval County	482
1943	120	1—Taylor County	595
1944	171		509
1945	209	2—Alachua & Duval Counties	no records
1946	213	1—Escambia County	1,337
1947	394	1—Polk County	1,434
1948	332	1—Hillsborough County	1,322
1949	73		770
1950	38		500+
1951	14		562
1952	21		422
1953	64		380
1954	89		423
1955	83		375
1956	62		441
1957	122		542
1958	62		487
1959	58		448
1960	36		403 (388 Semple) (15 duck embryo)

*With vaccine supplied by Florida State Board of Health.

BUREAU OF LABORATORIES

NATHAN J. SCHNEIDER, Ph.D., M.P.H.
Director

ORGANIZATION AND PERSONNEL

This bureau is responsible for providing laboratory services to the county health departments and to bureaus and divisions at the state level relating to their broad and varied public health programs. In addition, assistance is provided to licensed practitioners of the healing arts to diagnose and treat infectious diseases. There is also the responsibility to approve private and hospital laboratories for performance of serology tests for syphilis on prenatal and premarital patients.

In October 1960, the Board authorized establishment of a radiological section in the bureau. This was effected by transferring a Chemist III position and several items of chemical and radiation measuring equipment from the Bureau of Sanitary Engineering. By placing this unit in the Bureau of Laboratories, the needs for this type of service could be provided more economically to all bureaus and health departments. The same excellent (but minimal) surveillance of radioactivity in streams and rainfall already initiated, will be continued and extended as budgetary support permits. Hopefully, the expansion of this section to accommodate an adequate radiological health program for Florida will come in the next biennium if sufficient budgetary support is provided.

There were no significant personnel changes to report. The staff has been relatively stable as evidenced by the fact that approximately 46 per cent have been with the bureau over 10 years. Most of the senior technical and administrative personnel joined the bureau in junior positions and have progressed upward as experience and opportunities for advancement permitted.

The adequacy of laboratory quarters provided to the bureau, varied according to the location. In Jacksonville, the central laboratory has outgrown its present facilities and additional space is needed for chemical, radiological and virological activities. The present space is not adequate to allow expansion of chemistry facilities required in the regulation of the ". . . cosmetics, drugs, and devices act" passed by the 1959 Legislature.

Mention was made in the annual report of last year of the urgent need for more adequate facilities for virological laboratory services. This need became more apparent during the current year because of the poliomyelitis and encephalitis activities in Florida. Limited studies carried out by the State Board of Health and outside federal and private agencies uncovered evidence of the presence of arthropod-borne viruses in Florida. Some of these viral agents are known to cause encephalitis in man and animals. If adequate laboratory facilities can be obtained, a substantial amount of research money can be obtained from federal sources to investigate this important problem in Florida.

Attention is drawn again to the urgent need for new laboratory quarters for the Tampa and Pensacola Regional Laboratories. Both buildings housing these laboratories are over 50 years old and in need of major repairs. However, renovation is not economically sound nor is this feasible without a substantial appropriation from the legislature.

DIAGNOSTIC SERVICE

Attempting to meet the increased demands for service as reflected by population and general growth of the state, has been a challenge to the bureau particularly with budgetary limitations imposed by the 1959 Legislature. In part, this was met by reducing and eliminating less productive tests without interfering with ongoing public health programs or diagnostic assistance to physicians. Listed among the changes effected were limitations placed on the re-examination of health card applicants for enteric pathogens, reduction in the indiscriminate examination of microscopic smears for gonorrhea, elimination of examinations of spinal fluid as an indicator of syphilis by the colloidal gold test, reduction in widespread surveys for animal parasitic infections and a more careful selection of milk and dairy products submitted to the laboratory for examination.

In general, the same types of diagnostic services were made available in 1960 as in preceding years. Considering only the general public diagnostic laboratory services, in the year under review there was a minor reduction in the total number of examinations made. Table 35 presents information indicating that there were 2,580,179 tests performed in 1960 as compared to 2,654,266 for the preceding year. Much of this decrease was brought about by a reduction in the number of examinations of blood specimens for syphilis, as a result of a change in health department policy to require renewal of health cards annually instead of on a semi-annual basis. All regional laboratories except Tampa recorded a slight reduction in the total number of examinations made. Paradoxically, however, this decrease did not result in a smaller workload since many specimens, particularly in diagnostic enteric bacteriology and virology, were subjected to more complicated test procedures in order to insure greater sensitivity and specificity.

Again, as was noted in previous years, there was a marked increase in sanitary bacteriology for both drinking and pollution water samples; a total of 184,862 and 36,800 examinations were made for the respective categories. These figures could easily have been doubled had there been greater staff and larger laboratory facilities to process more specimens. The increased growth in population and the destruction caused by spring and summer rains in central Florida and Hurricane Donna in south Florida, were major factors in increasing the demands for sanitary bacteriology laboratory services. Fortunately, emergency funds made available from Civil Defense, provided membrane filter testing equipment and supplies. These helped to provide bacteriological tests on drinking water within 18-24 hours as compared to 48-96 hours required by the slower lactose broth fermentation procedure.

The results of examinations by findings are presented in Table 36. A total of 681,443 blood specimens were examined for syphilis of which 31,939 were found reactive. Excluding the specimens unsatisfactory for testing, the proportion reactive was 4.9 per cent as compared to 5.2 per cent in 1959. A total of 111 serum specimens were sent to the Venereal Disease Research Laboratory (VDRL) for TPI testing and 49 or 44.1 per cent were found to be reactive. The clinicians in Florida have cooperated very well in adhering to the rigid criteria for pre-selection of specimens submitted to VDRL for this test.

The number of specimens found positive for diphtheria in 1960 increased from 124 in 1959 to 217, whereas in 1958 only 67 positives were found. The presence of virulent diphtheria organisms in the community emphasizes the need for widespread immunization against diphtheria.

The total number of public health tuberculosis specimens reported to have been examined in 1960 was 41,432 which is slightly higher than the preceding year. During the period 1951 through 1960 (see Table 38) the proportion of positive specimens decreased annually from 15.9 per cent in 1951 to 6.5 per cent in 1960. Considering sputum specimens alone, the proportion of those yielding *M. tuberculosis* either microscopically or culturally or by both procedures varied from a high of 16.1 per cent in 1951 to 6.4 per cent in 1960. Apparently effective early case finding and drug therapy have contributed greatly to a decrease in the amount of positive tuberculosis specimens received in the laboratory. Despite these heroic efforts, there still remains a significant reservoir of this infection in the community. It is noted that the proportion of positive gastric specimens which ranged less than 10 per cent in 1951, 1953 and 1954-56, suddenly increased to approximately 15 per cent during 1958 through 1960. Perhaps the explanation may be found in the fact that during this period the chest clinic of the Dade County Department of Public Health and University of Miami have been carrying out a cooperative study of gastric specimens and aerosol bronchial lavage specimens for the diagnosis of tuberculosis. A high percentage of the patients in this study were known to have tuberculosis, thus causing the proportion of positive specimens to make a dramatic increase.

Smear specimens submitted for the diagnosis of gonorrhea decreased in number from 44,745 in 1959 to 40,864 in 1960. The proportion of positives increased to 15.2 per cent as compared to 10.1 and 12.5 per cent in 1958 and 1959 respectively. Cultures for *Neisseria gonorrhea* increased from 23,012 specimens in 1959 to 28,061 and the proportion positives were 5.2 and 8.0 per cent, respectively. This is a disturbing trend in view of the major effort and apparently effective therapy being applied to this disease.

The number of fecal specimens examined for enteric infections decreased from 55,793 in 1959 to 45,391 in 1960. As explained previously, this decrease resulted from a change in policy regarding the routine examination of apparently healthy applicants applying for health cards.

There were 72 isolations of *S. typhosa,* 16 less than 1959 and 457 isolations of other *Salmonella* (290 in 1959). The number of isolations of *Shigella* totalled 94 in 1960 as compared to 99 in 1959.

Human leptospirosis was confirmed by laboratory findings in 21 patients during the year under review. Paired serum specimens of patients with clinical aseptic meningitis of suspected viral etiology were tested routinely for a rise in agglutinaton titer against leptospiral antigens.

Four blood culture specimens from 1 patient were found positive for *Brucella suis.* Although serological evidence of brucellosis is not uncommon in Florida, cultural isolations of brucella have been rare.

Among the miscellaneous examinations, there is a continuation of a significant trend to be noted in the finding of early cases of syphilis. In 1960, 160 dark-field specimens were positive for *T. pallidum;* this is in contrast to 19 in 1954, 8 in 1956, none in 1957 and 1958 and 72 in 1959. Apparently increased interest in checking suspect lesions is uncovering more laboratory confirmed primary cases of syphilis.

An increase in mycological positive examinations was noted in 1960. There were a total of 1450 specimens found positive in 1960 as compared to 1155 in the preceding year. Much of this increase may be attributed to the interest of the clinicians using griseofulvin therapy.

In the field of sanitary bacteriology, there was a decrease of dairy products examined; however, this was offset by the increase in drinking and swimming pool waters and pollution water surveys for bacteriological analysis.

In the field of dental caries bacteriology, 2794 saliva specimens were examined for lactobacillus counts. This service, made available to dentists on a statewide basis, has apparently met with favorable acceptance. There was a 36 per cent increase in specimen load during the year under review as compared to the preceding year.

The examinations for intestinal parasites represented a large volume of work. In 1960, a total of 120,405 specimens were examined as compared to 128,161 in the preceding year. There was an increase in the number of hookworm, enterobius (pinworm) and *E. histolytica* specimens found positive.

The chemistry section noted a large increase in the number of blood specimens submitted for hemoglobin and blood sugar determinations as well as toxicological and narcotics specimens. The latter represent a large amount of work as the chemist usually must appear in court to testify as an expert witness. An increasing number of such cases are being encountered in the Tampa area, making it highly important to establish a chemistry section in the regional laboratory in that area.

Diagnostic services for viral and rickettsial infections were offered on a statewide basis from the Jacksonville laboratory. As presented in Table 37 there was a decrease in the number of positive findings by patient.

With but 3 exceptions, there was a decrease in poliomyelitis, ECHO and Coxsackie viral infections. In contrast, there was a marked increase in the number of cases of St. Louis encephalitis, mumps and psittacosis. The number of rabid animals examined during the year dropped from 40 in 1959 to 30 in 1960 (See Table 36).

The nature and extent of the cooperative program in the laboratory field established between the State Board of Health and the Tuberculosis Board and its 3 hospitals has been described in previous annual reports. This arrangement has contributed greatly toward the success of the tuberculosis control program in Florida. The amount of work performed in the tuberculosis hospitals is presented in Table 39. A total of 48,632 bacteriological examinations were made for tuberculosis and 4869 cultures of *M. tuberculosis* were tested for susceptibilities towards the antituberculosis drugs currently in use. The hospital laboratories performed a large number of other bacteriological, mycological and clinical tests. A substantial amount of work in special studies was performed in the central and hospital laboratories of the tuberculosis hospitals.

SPECIAL STUDIES

Research continues to play an important role in the accomplishments of the bureau. Approximately $85,000 was obtained in research grants or allocations. The weakness of this program is that state funds for basic support have not been available. Tables 35 and 36 list a wide variety of special projects with which the bureau was concerned.

Four new projects were initiated during the year under review; *viz* the fluorescent antibody test for the rapid identification of Group A streptococci; human viral antibody studies in Dade County; special studies in the laboratory diagnosis of venereal diseases; and pollen studies in Florida.

Although listed under special projects, the complete identification and typing of *Salmonella* and *Arizona* bacteriological cultures has become established in the Jacksonville laboratory. A total of 786 cultures were identified during the year under review as compared to 432 during 1959.

Research in fluorescent microscopy was continued in rabies diagnosis and extended to the streptococci. Favorable results obtained by use of this technic in the rapid identification of rabies virus in brain tissue has indicated the feasibility of incorporating this procedure in the diagnostic routine. The bureau is planning to replace the mouse inoculation, a slower procedure, with the fluorescent rabies antibody test. However, all animal brains will continue to be examined for Negri bodies since this is a rapid and relatively simple and productive procedure. Mouse inoculations will be performed on a sampling of animal brains in order to continue comparative evaluation studies of the fluorescent antibody test. Mouse tests will also be used on tissues considered unsatisfactory for microscopic examinations. This study was supported in part by a research grant from the National Institutes of Health, U. S. Public Health Service.

Fluorescent microscopy studies for the rapid identification of Group A streptococci were initiated early in the year. Special optical equipment and 1 technical person were provided by the heart disease control program of the USPHS. Preliminary findings indicate that this procedure is more sensitive than the conventional cultural tests, however, it is possible to demonstrate the presence of Group A streptococci in throat specimens within several hours as compared to several days by cultural methods. This procedure is still a research tool and cannot be considered ready for routine use for diagnostic work at this time. The major handicap is the lack of a commercial source of consistently acceptable lots of high titered fluorescein labelled Group A streptococcal antisera. There are also problems of antigenic crossing between Group A and Groups C and G.

Studies of infections in wild animals were continued during the year. The rabies project supported by the USPHS has been reported elsewhere in this volume (see report of Division of Veterinary Public Health).

Antibody studies to determine the presence of past viral infections in humans were carried out in Dade and Pinellas Counties. In the former, both Jacksonville and Miami laboratories participated in the oral polio vaccine feeding trials of the Dade County Department of Public Health and the University of Miami. The latter study was concerned with completion of examinations for arbor virus antibody in Pinellas County where there had been an outbreak of St. Louis encephalitis late in 1959. Both of these studies are reported more fully in the report of the Bureau of Preventable Diseases.

Special studies concerned with the epidemiology of pulmonary diseases associated with unclassified mycobacteria were continued. This study, supported in part by a research grant from the USPHS, is being carried out with the Bureau of Preventable Diseases and is reported in the narrative provided by that bureau.

A limited study to determine the nature and extent of *C. diphtheria* in cutaneous lesions was carried out. No promising leads were obtained so it was not extended.

The central laboratory has established the chemical test for phenylalanine in blood serum. This procedure is useful in determining the presence of phenylketonuria (PKU) which is a condition leading to mental retardation unless treated early in life.

Two studies were carried out in the Miami Regional Laboratory during the year. One, supported by a contract with the Armed Forces Epidemiological Board of the U. S. Department of Defense, is concerned with determining the role of viruses in diarrheal disease in man. As reported in the annual report of last year, the study is being carried out in close cooperation with Gustave J. Dammin, M.D., Pathologist in Chief, Peter Bent Brigham Hospital, Boston. The study has helped the bureau to develop virological diagnostic potentialities in the Miami laboratory.

State funds to support a routine diagnostic service in virology is needed before this potential can be fully realized.

A second study in Miami was the continuation of the evaluation of the relative efficacy of the aerosol lavage as a productive procedure to obtain specimens from suspect tuberculosis patients for diagnostic purposes. Apparently, this procedure proved to be quite effective and its use has been extended to the tuberculosis hospitals and other tuberculosis control centers. This study was supported by a research grant made by the USPHS to the University of Miami.

The Miami laboratory participated very effectively in the Dade County oral polio vaccine feeding studies which were supported, in part, by Lederle Laboratories.

In Jacksonville, a small study concerned with the determination of the nature and extent of airborne pollen in selected areas in Florida was initiated. This project, under the direction of John M. McDonald, M.D. (recently retired from directorship of the Division of Industrial Hygiene) was sponsored by a grant from the Florida Tuberculosis and Health Association. A series of 30 stations were established in Florida and 24-hour samples are taken daily to determine quantitatively an estimate of the pollen circulating in the air. These pollen sampling slides are shipped to Jacksonville for examination in the laboratory. Much interest has been shown by prospective visitors to Florida in the results of this project.

Several special studies were carried out in all laboratories relating to the evaluation of the membrane filter as a diagnostic tool for the rapid examination of drinking water. By means of these studies, all laboratories in the bureau have been or will soon be offering this test procedure as part of their routine. Several new culture media were subjected to limited evaluation studies to determine their efficacy in the laboratory. This is done routinely when newer knowledge becomes available and before a new procedure is established in the laboratory.

CONSULTATIVE AND EDUCATIONAL SERVICES

The bureau offered technical and consultative guidance to 4 medical technologists, 3 residents in pediatrics, 4 new health officers, 2 classes of student sanitarians and a foreign medical visitor from Vietnam. The members of the staff participated in career day high school pragrams in Jacksonville. Similar activities were carried out in each of the regional laboratories. Medical and biological science college students were accepted for training in the laboratory during the summer months thus providing them first hand experience in public health. A modest stipend was provided each student.

This bureau had specific responsibilities for the approval of 208 clinical laboratories to perform standard serological examinations for syphilis for premarital and prenatal patients. Thirty-six public health and armed forces laboratories participated in this self evaluation also.

A total of 9600 serology unknown specimens were distributed in 1960 as part of the evaluation procedure for approving such laboratories.

The bureau was instrumental in bringing Gerald R. Cooper, M.D., Chief of the Department of Biochemistry and Hematology, Laboratory Branch, Communicable Disease Center, to Florida for a series of lectures to the medical technologists of Florida. This activity is sponsored jointly with the Board of Basic Sciences and the Florida Society of Medical Technologists.

Joseph Portnoy, Ph.D., and Miss Genevieve Stout, representing the Venereal Disease Research Laboratories of the USPHS, visited the bureau. Dr. Portnoy provided consultation on the use of the rapid plasma reagin (RPR) test for syphilis which was carried out at the Health Fair in Sarasota in February 1960. Miss Stout reviewed the technical procedures in the syphilis serology section of the Jacksonville laboratory and also presented a technical lecture to the Florida Society of Medical Technologists membership.

Continuing visits and inspections were made to 18 commercial dairy laboratories for the purpose of certification to perform bacteriological and related tests in accordance with Standard Methods and USPHS requirements. This service has undoubtedly raised the level of proficiency and standardization of performance of dairy laboratory testing in Florida.

A total of 3 members of the bureau were afforded the opportunity to take refresher training short courses offered by the USPHS. These were in the field of syphilis serology, fluorescent antibody microscopy and sanitary bacteriology.

Reference diagnostic work offered to private and hospital clinical laboratories included the identification of over 450 mycology and bacteriological cultures. Similarly, a total of 375 specimens were referred to the Communicable Disease Center Laboratories for further identification and confirmation.

Revision as of January 1, 1960, of Previously Published List of Laboratories Approved for Premarital and Prenatal Serology.

ADDED

Abby Medical Center, 5190 S. W. 8th Street, Miami
Brevard Medical Group Laboratory, Brevard Hotel, Cocoa
Broward Bio-Clinical Laboratory, Inc., P. O. Box 10226, Ft. Lauderdale
Clinical Microbiology Laboratory, University Teaching Hospital, Gainesville
Drs. Dyrenforth, Eversole and Mullins, 3127 Atlantic Boulevard, Jacksonville
Jackson Memorial Hospital Laboratory, Dade City
Lacy, George E., M.D., 3105 Grand Avenue, Coconut Grove
Medical Arts Clinical Laboratory, 444 N. Dillard Street, Winter Garden
Medical Laboratory and X-Ray, Courson Medical Building, Titusville

Medical Service Laboratory, 2214 Avenue "B" S. W., Winter Haven
Monaco, A. Ralph, M.D., 624 Cove Road, Panama City
Monaco Medical Laboratory, 112 C. Orange Street, Deland
Okaloosa Memorial Hospital Laboratory, 601 N. Pearl Street, Crestview
Pompano Beach Medical Laboratory, 2701 Atlantic Boulevard, Pompano Beach
Putnam Memorial Hospital Laboratory, Palm Avenue, Palatka
Sebring Clinical Laboratory, 27 East Center Street, Sebring
South Broward Hospital Laboratory, 559 S. Federal Highway, Dania
South Lake Memorial Hospital Laboratory, Clermont
Sterns Medical and Research Laboratory, 12985 W. Dixie Highway, North Miami
Watkins Medical Laboratory, 265 Aragon Avenue, Coral Gables

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Schneider, N. J., Prather, E. C., Lewis, A. L., Scatterday, J. E., Hardy, A. V. Enteric bacteriological studies in a large colony of primates. Ann. N. York Acad. Sci. 85:935-41, May 12, 1960.

TABLE 35
EXAMINATIONS PERFORMED BY LABORATORIES — 1960

	Jacksonville	Tampa	Miami	Pensacola	Tallahassee	Orlando	West Palm Beach	Daytona Beach	Pinellas County	Total
GRAND TOTALS	928,726	562,010	491,841	143,162	123,681	169,742	114,843	15,631	30,543	2,580,179
SEROLOGY	387,918	342,364	349,212	85,227	52,140	54,640	41,232			1,312,733
Syphilis	2,223	223	1,536	99	96	98	52			4,322
Agglutinated & related tests	4,249	6,767	3,012	1,423	1,004	915	946			18,316
Blood typing (Rh)				209		1,098	164	90		11,201
DIAGNOSTIC BACTERIOLOGY	5,931	3,422	287		5,909		11,434			118,366
Diphtheria & associated infections	92,509		8,514		11,220		326	136		81,168
Tuberculosis	21,768	20,814	21,394	5,510	2,209					29,630
G.C.—Smear	2,560	16,094	6,700	2,067	13,868	37,604	4,130	70		181,594
Culture	71,264	43,070	7,040	4,548	80	496	48			1,400
Enteric	664		40	72						2,520
Blood culture	2,520									86,291
Leptospirosis	54,363	4,163	3,488	492	32	19,741	3,206	806		
Miscellaneous										
SANITARY BACTERIOLOGY	20,880	45,474	23,214	13,560	16,224	14,027	20,406	6,924	9,786	170,495
Dairy products	22,854	40,638	31,592	9,378	9,662	21,602	25,922	5,382	17,832	184,862
Water, drinking & pools	8,760	6,020	7,635	2,175	2,410	4,870	2,085		2,845	86,800
Pollution surveys	2,219	7	525	208	406	63	7			3,430
Food (sanitary quality tests)	382	230	470	20	60	1,388	18	52		2,620
Food poisoning	561	21	13		148	694	174	1,060	80	2,751
Utensils	5,370									5,370
DENTAL CARIES BACTERIOLOGY		22,107	6,077	12,087	7,149	9,751	8,292	721		117,259
PARASITOLOGY	56,125	60	40	8	8	2	20			222
Intestinal parasites	84	3	75	987		1,566	60			15,858
Malaria	13,167									
MYCOLOGY		9,323	995	4,342	863	781	1,159	224		29,972
CHEMISTRY	11,785		265	7	87	2				2,078
Blood	1,717		230	8		13	162	166		660
Spinal fluid	81		364							1,311
Urine	947		257							2,744
Toxicology	2,487		9,067							12,725
Water	3,658									
Other										
VETERINARY PUBLIC HEALTH	4,810									4,810
Leptospirosis	1,870									1,870
Other										

TABLE 35 (Continued)
EXAMINATIONS PERFORMED BY LABORATORIES — 1960

	Jacksonville	Tampa	Miami	Pensacola	Tallahassee	Orlando	West Palm Beach	Daytona Beach	Pinellas County	Total
VIRAL & RICKETTSIAL DIAGNOSTIC SERVICES										
Serology—neutralizations	4,603									4,603
complement fixation	26,656									26,656
Isolations (except rabies)	7,014									7,014
Rabies—microscopic	1,136	1,210	516	290	106	396				3,654
mouse inoculation	1,682									1,682
SPECIAL PROJECTS										
Salmonella—Arizona typing	4,020									4,020
Fluorescent antibody										
Rabies	592									592
Streptococcus	4,037									4,037
Wild animal (including bats)										
Rabies virus isolations	1,454									1,454
Rabies virus serology	588									588
Bird isolations for arbor viruses	130									130
Birds for psittacosis	110									110
Monkey viral studies	1,868									1,868
Human viral antibody studies										
Dade County polio vaccine	20,559									20,559
Pinellas County arbor virus	3,815									3,815
Unclassified mycobacteria	3,210									3,210
Staphylococcal phage typing	24,840									24,840
Staphylococcal studies	13,986									13,986
Diphtheria lesion study	200									200
Diarrheal disease viral studies			8,328							8,328
Tuberculosis—aerosol			955							955
Pollen studies	4,500									4,500

TABLE 36
SPECIMENS SUBMITTED FOR EXAMINATION BY FINDINGS—1960

EXAMINATION	Number of Specimens				
	Positive Specimens		Negative	Unsat.	Total
	One or More Positive Findings	Positive for Findings Indicated			
SEROLOGY					
Syphilis	31,939		637,737	11,767	681,443
Agglutinated & related tests	704		2,914	127	3,745
Typhoid		439			
Typhus		5			
Brucellosis		58			
Tularemia		2			
Heterophile		299			
Other		3			
Blood typing (Rh)					17,220
DIAGNOSTIC BACTERIOLOGY					
Diphtheria & associated infections	1,491		3,364	17	4,872
C. diphtheria		217			
Vincents		39			
Streptococci		382			
Other		1,218			
Tuberculosis	2,466		35,579	3,387	41,432
Sputum		2,279			
Urine		40			
Gastric		75			
Spinal fluid		3			
Other fluids & exudates		56			
Other		13			
Animal inoculations (G.P.)					40
Gonorrhea—smears	22,215		18,369	280	40,864
Intracellular Gram negative diplococci		6,169			
Extracellular Gram negative diplococci		378			
Trichomonads		3,705			
Yeasts		1,722			
Vincents organisms		352			
Many pus cells		11,004			
Gonorrhea—cultures	2,180		25,270	611	28,061
Enteric infections	669		43,726	996	45,391
S. typhosa		72			
Other Salmonella		457			
Shigella (Flexner & Sonnei)		94			
Other		40			
Blood cultures	27		148	6	181
Brucella		4			
Other		23			
Leptospirosis	21		588		609
Miscellaneous	7,667		6,511	35	14,213
Darkfield—T. pallidum		160			
Chancroid—Ducrey's		29			
Granuloma—Donovan bodies		28			
Gonococcus in eye		14			
Other eye smears		179			
Other eye cultures		48			
Urine cultures		522			
Spinal fluid cultures		21			
Pleural fluid cultures		3			
Other fluids & exudates		407			
Mycological examinations		1,450			
Organisms for identification		1,176			
Sensitivity testing		450			
Other examinations		3,132			
Miscellaneous special services		48			
SANITARY BACTERIOLOGY					
Dairy products					28,316
Water, drinking & pools					92,619
Water, pollution surveys					7,553
Foods, (sanitary quality tests)					490
Food poisoning					424
Utensil swabs					2,227

TABLE 36 (Continued)
SPECIMENS SUBMITTED FOR EXAMINATION BY FINDINGS—1960

EXAMINATION	Number of Specimens				
	Positive Specimens				
	One or More Positive Findings	Positive for Findings Indicated	Negative	Unsat.	Total
DENTAL CARIES BACTERIOLOGY					2,794
PARASITOLOGY					
Intestinal parasites	22,536		94,723	3,146	120,405
Hookworm		9,027			
Ascaris		5,200			
Enterobius		4,371			
Trichuria		639			
Other helminths		155			
E. histolytica		224			
Nonpathogenic amoeba		4,269			
Flagellates		3,489			
Others		2			
Malaria	1		110	4	115
P. vivax		1			
CHEMISTRY					
Blood					30,232
Spinal fluid					1,321
Urine					355
Water					841
Toxicology & narcotics					1,958
Other					10,453
VETERINARY PUBLIC HEALTH					
Leptospirosis	35		402	44	481
Other	122		64	1	187
VIRAL & RICKETTSIAL DIAGNOSTIC SERVICES					
Serology—neutralizations					373
complement fixation					6,664
Isolations (except rabies)					714
Rabies—microscopic	*30		1,748	49	1,827
Dog		2			
Cat		5			
Fox		1			
Raccoon		21			
Bat		1			
Mouse inoculations					1,659
SPECIAL PROJECTS					
Salmonella—Arizona typing					786
Fluorescent antibody					
Rabies					148
Streptococcus					203
Wild Animal (including bats)					
Rabies virus isolations	*4		439		443
Rabies virus serology					23
Bird isolations for arbor viruses					21
Birds for psittacosis					22
Monkey viral studies					101
Human viral antibody studies					
Dade County polio vaccine					1,764
Pinellas County arbor virus					334
Unclassified mycobacteria					400
Staphylococcal phage typing					828
Staphylococcal studies					2,509
Diphtheria lesion study					20
Diarrheal disease viral studies					4,227
Tuberculosis—aerosol					955
Pollen studies					4,500
TOTAL					1,207,363

*Total positive rabies 34

TABLE 37
VIRAL AND RICKETTSIAL DIAGNOSTIC FINDINGS BY PATIENT IN 1960

	Positive	Negative	Total
Lymphocytic choriomeningitis	1	391	392
Mumps	43	375	418
Eastern equine encephalomyelitis	1	390	391
Western equine encephalomyelitis		4	4
St. Louis encephalomyelitis	24	380	404
Herpes Simplex	1	2	3
Poliomyelitis type 1	30	337	367
Poliomyelitis type 2	1	286	287
Poliomyelitis type 3	7	316	323
Measles		8	8
Vaccinia-variola		3	3
Murine typhus	1	15	16
Rickettsialpox—Rocky Mt. spotted fever		32	32
Q fever		11	11
Influenza A	14	56	70
Influenza B		73	73
Influenza C		28	28
Influenza D		23	23
Para-influenza 1, 2, 3		65	65
Psittacosis—LGV	4	51	55
Adenovirus	1	64	65
Dengue		1	1
ECHO types 5, 12, 14, 18, 22	6		6
ECHO untyped	1		1
Coxsackie B2, B3, B4, B5	10		10
Other—undetermined viral agent(s)		103	103
TOTALS	145	3,014	3,159

TABLE 38
PERCENTAGE OF SPECIMENS EXAMINED FOR M. TUBERCULOSIS AND FOUND TO BE POSITIVE 1951 - 1960

Year	All Specimens	Sputum	Gastrics	Other
1951	15.9	16.1	10.9	7.3
1952	14.8	15.0	17.7	6.6
1953	12.1	12.8	9.7	5.3
1954	10.8	11.0	13.3	2.9
1955	8.2	8.9	7.9	1.9
1956	8.8	9.0	8.0	4.5
1957	7.8	7.9	6.9	4.2
1958	7.3	6.8	14.1	4.2
1959	6.9	6.8	15.6	5.8
1960	6.5	6.4	16.4	7.8

TABLE 39
EXAMINATIONS PERFORMED IN TUBERCULOSIS HOSPITAL LABORATORIES*, 1960

	Tampa	Lantana**	Tallahassee**	Totals
Totals—Excluding Special Studies	52,180	32,007	20,332	104,519
Tuberculosis				
Diagnostic	22,593	16,389	9,650	48,632
Drug susceptibility	2,573	1,355	941	4,869
Mycology	1,988	1,067	457	3,512
Miscellaneous bacteriology	3,943	2,563	1,322	7,828
Hematology	8,689	6,990	5,965	21,644
Chemistry	8,612	1,836	651	11,099
Urine analysis	2,919	1,807	1,021	5,747
Other	863	0	325	1,188
Special Studies and Reference Tests:				
Unclassified mycobacteria	3,628			
C. albicans tracer	682			
Catalase and peroxidase	1,173			
Trisodium phosphate digestion	234			
INH bioassay (tube dilution)	1,357			
INH bioassay (vertical diffusion)	161			

*Operated under direction of Bureau of Laboratories; budgetarily supported by State Tuberculosis Board.
**Combined Regional Public Health and Hospital Laboratories.

BUREAU OF SPECIAL HEALTH SERVICES

S. D. DOFF, M.D., M.P.H.
Director

At midyear the director of this bureau exchanged administrative responsibilities with the director of the Bureau of Maternal and Child Health as part of a general reassignment of personnel at this level.

The organization of the bureau remained unchanged with the Division of Chronic Diseases including programs for cancer, diabetes and heart disease control and the Division of Hospitals and Nursing Homes comprising regulatory and educational programs for hospitals and nursing homes. The bureau includes, in addition, the Accident Prevention Program and serves as an information center in Civil Defense matters.

At midyear responsibility for the hospital services program providing hospital care for the acutely ill or injured indigent person was taken over by the office of the State Health Officer. However, since the hospitalization of cancer, heart, diabetes and accidents represent a substantial share of the hospitalized indigent the bureau maintained close liaison with this program. A majority of patients are 65 or over.

In 1960 substantial progress was made in 2 of the bureau's 7 program areas; cancer and nursing home programs. In the cancer program a new tumor clinic was established in the White-Wilson Clinic at Fort Walton Beach, Okaloosa County. The special project in cancer detection successfully completed its work in Dade County with the demonstration of a high frequency of cancer of the cervix among women studied. In the latter half of the year 2 full-time professional staff members were assigned to the nursing home section. Expansion of every phase of the nursing home program was aided by support from the U. S. Public Health Service.

A special study of the accident prevention program indicated the need for a closer working relationship between bureaus and an interbureau accident prevention committee was formed early in 1960.

In 1960, 2 USPHS medical officers were assigned from the heart disease control program to work in Florida for a period of 2 years. One stationed in Miami is assisting in the heart program development in Dade County. A second is aiding in heart program administration at the state level.

The 1960 bureau experience has been especially noteworthy for the development of activities requiring broader cooperation with other bureaus and divisions in such areas as the accident prevention, cancer control, nursing home programs and Civil Defense.

While the several programs of the bureau are distinctive each bears a close relationship to 1 or more of the others. The accident prevention program included specific activities designed to reduce the risk of fires

and accidents in nursing homes. The nursing home program in both its regulatory and educational aspects affects the quality of care of the many chronically ill persons. Heart disease, cancer and diabetes are causes of illness representing a large proportion of hospitalized indigent persons.

ACCIDENT PREVENTION PROGRAM

The rate of reported poisoning cases treated at the Poison Control Centers showed an approximate 50 per cent increase over the year 1959. Kerosene and aspirin remained in the lead of the list of poisonous substances ingested. In cooperation with the Florida Pediatric Society and the Florida Chapter, American Academy of Pediatrics, about 40 new file cards detailing toxic ingredients of products and substances of particular interest to the Florida Poison Control Centers were produced and distributed to the Centers. A copy of each card was sent to the National Clearinghouse for Poison Control Centers.

A study of causes of accidental injuries to children in vehicles conducted jointly by the State Board of Health and members of the Florida Pediatric Society, with some cooperation from hospitals, was completed during the year. The data collected showed that in 50 per cent of the accidents reported children were injured as a result of falls which occurred inside a moving vehicle which was not involved in a collision. Pediatricians and hospitals furnished the information; this program performed the necessary tabulations. At year's end a plan to effectively publicize the findings was under study and development.

A limited survey of accidents to residents of nursing homes was completed. A crude analysis of the information provided showed a preponderance of injuries involving the hip and the upper and lower extremities of which the majority were represented by fractures of bones. Injuries were considered to be fatal in 1 out of 30 accidents. Approximately half of the accidents resulted in temporary disability and 10 per cent resulted in permanent disability. Walking without aid, falling out of bed and other falls were the principal reported causes of these accidents. There were twice as many accidents during the months of October through March than during April through September. Two-thirds of the accidents occurred during the hours between 12 midnight and noon and approximately two-thirds occurred in the bedroom of the injured person. The use of sedatives and tranquilizers did not appear to be associated with the injuries as a possible causal facture. However, in 20 per cent of the accidents the patient was taking tranquilizing drugs. Only 10 per cent of those involved in accidents had no history of previous accidents. Nursing home operators have requested a larger, more detailed study of accidents among both patients and employees in 1961. This request was granted. A detailed questionnaire was designed, and details of the entire operation were worked out with the Data Processing Unit.

A new cooperative study to secure information on how children are injured with toys and other playthings was started during 1960. The fact-finding portion of the study will end February 28, 1961. Educational

programs utilizing the findings will be worked out after that date. Cooperating groups are the National Safety Council, Florida Pediatric Society, Florida Chapter, American Academy of Pediatrics, the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, 20 Poison Control Centers and the State Board of Health. Florida was selected for this study on the recommendation of the American Academy of Pediatrics because the people involved have a reputation for "getting things done."

The fact-finding phase of the Florida Farm Safety Committee, on which the State Board of Health holds membership, was launched during the year with the organization of local groups in Walton, Alachua and Lake Counties and in an area around Lake Okeechobee comprising parts of Palm Beach, Glades and Hendry Counties. The results of these simultaneous surveys were just beginning to come in at year's end.

Substantial time is given by the consultant in personal appearances and talks and lectures before state and local officials and voluntary agencies and organizations on the subject of accident prevention.

A demonstration on fire prevention was developed by the consultant for the program. It was adopted by the Jacksonville-Duval County Safety Council and by the fire departments of Jacksonville and Marianna. This demonstration has been shown before some 50 organizations including such diverse groups as men's and women's service clubs, student bodies, PTA's, insurance underwriter groups and hotel maintenance crews. Several high schools now include it as a regular part of their curriculum.

The accident prevention program was given an opportunity to provide an exhibit at the Florida Medical Association meeting in Miami Beach.

A particular effort was made during the year to bring nursing home problems to the attention of individuals and groups responsible for making fire inspections in nursing homes in order to insure the absence of fire hazards, the presence of fire-fighting, fire-controlling devices and adequate fire exits. In formal and informal discussions and lectures firemen were apprised of the condition of patients in nursing homes which made it necessary to insist upon the highest possible standards of protection against this hazard.

In 1960 the State Health Officer directed that an interbureau accident prevention committee should be organized. This committee held 7 meetings during the year and was able to initiate several important accident prevention activities. It also served the bureau in an advisory capacity in program development. The relation of accidents among State Board of Health and county health department employees is given major attention as a result of this committee's deliberations.

CIVIL DEFENSE PROGRAM

The State Board of Health is responsible for medical care and public health activities in the event of disaster, under the state plan for Civil

Defense. This responsibility has been described in a previous annual report and a complex table of organization comprising State Board of Health and county health department personnel has been evolved. Notwithstanding the gravity of the responsibility which this agency would have in the event of a disaster there has as yet been no assignment of a full-time person in this program area.

During 1961 federal responsibility for the prepositioned prepackaged emergency hospitals to be used in the event of a disaster was transferred to the USPHS. It is anticipated local responsibilities for these hospitals may therefore become the responsibility of the State Board of Health. This situation has not been clarified. Efforts have been made to increase interest on the part of local and state health department personnel in Civil Defense matters. However, the lack of staffed positions to carry out such work has been a handicap, although efforts have been made to maintain a close liaison with the office of the Director of State Civil Defense. Within the limits of the budget, State Board of Health and county health department personnel are attending Civil Defense meetings and courses held both in the state and in locations designated by the Office of Civil Defense Mobilization. During 1960 federal funds became available to the states on a matching basis for Civil Defense work. The State Board of Health was unable to take advantage of the availability of these funds due to our inability to establish a staff position with major responsibilities for this program.

Articles by staff members:

Parks, L. L., Remein, Q. R., Shields, L. S., and Turvaville, J. Screening relatives of diabetics in five Florida counties. Public Health Rep. 75:55-59, 1960.

Turvaville, J. Diabetes case finding among relatives of indigent diabetics in Florida. J. Florida M. Asso. 46:1381-83, May 1960.

DIVISION OF HOSPITALS AND NURSING HOMES

S. D. DOFF, M.D., M.P.H.
Acting Director

At the close of 1960 this division included the hospital and nursing home licensure programs. The Hospital Service for the Indigent program is detailed at the end of this bureau's report.

An increase in general health services funds specifically earmarked for activity which would improve the nursing home program became available in the last quarter of the calendar year. These funds made it possible to augment the consultant staff responsible for nursing home work. Also through the cooperation of the Duval County Health Department nursing home licensure in Jacksonville, formerly the responsibility of this office, was taken over by the county health department.

Funds were provided for 3 special projects to be initiated in the last half of the current fiscal year. A Guide for Nursing Home Operators is being prepared by the staff and will be ready for publication by June 1961. A plan designed to increase the interest of church groups in the provision of facilities for the care of the aged will also be initiated in the last half of the present fiscal year. Finally, a special study of the nursing care needs of patients in nursing homes will be done. It is hoped that as a result of this project the classification of nursing home patients according to their nursing care needs will be possible.

TABLE 40
HOSPITAL EVALUATION STATISTICS, 1960

	Calendar Year 1960	1959	1958
Hospitals (incl. state & federal)	193	203	214
Hospitals licensed & unlicensed (incl. state & federal)	171	181	192
Licensed hospitals	147	146	119
Ineligible for classification as hospitals	14	6	8
Voluntarily ceasing operations	1	4	10
Remaining to be licensed as of December 31	9	25	55
Plans reviewed for construction and/or renovation	75	86	27
Hospitals surveyed	92	102	124
Hospital beds (incl. state & federal)	32,988*	28,155	27,543
Bassinets (incl. state & federal)	2,728*	2,613	2,513
Total beds subject to licensure	17,750*	15,190	14,017
Total bassinets subject to licensure	2,432*	2,317	2,247

*Estimated from latest data concerning state and federal hospitals.

During 1960 further evidence was shown of the increasing concentration of hospital beds into larger institutions, the elimination of submarginal facilities and the substantial increase of available hospital beds. For example, while the number of nonstate or nonfederal hospitals has decreased since 1958, hospital beds available have increased approximately 16 per cent and bassinets approximately 5 per cent.

At the same time the backlog of hospitals remaining to be licensed as of December 31 has decreased approximately 84 per cent since 1958.

These accomplishments have been made in spite of the fact that only approximately 1.5 man years of hospital consultant time have been available for the hospital program during 1960, due to staff changes. The division was without the services of a medical director as of November 1, 1960. One hospital consultant was transferred to the Hospital Services for the Indigent Program in May and the other consultant resigned in June. To fill these vacancies the 1 nursing home consultant was transferred to the hospital program and an additional consultant was employed July 1. These 2 consultants assumed responsibility for both the hospital and the nursing home licensure program until November 1, when a full-time consultant to the nursing home program was added. In addition to the above consultants the division staff consists of 1 secretary and 1 stenographer.

Much remains to be done in the hospital licensing program. The division's goal of surveying every hospital at least once during the year is not presently being achieved. It has not yet been possible to survey renovations, alterations and new construction projects at the time they are completed. The time necessary to accomplish more expeditious reviews of plans for such projects is still not available, though the backlog of the number of projects awaiting review at any one time has been reduced to a manageable level.

The hospital licensure program is assisted by the Advisory Hospital Council, which consists of the State Health Officer, who serves as chairman ex-officio, and the following: Autha W. Forehand, Tallahassee; W. W. Richardson, M.D., Graceville; Raymond King, M.D., Jacksonville; Robert Eleazer, Jacksonville; Hon. James H. Sweeny, Jr., DeLand; John Wymer, West Palm Beach. The members are appointed by the Governor from nongovernmental organizations and state agencies concerned with the operation, construction and utilization of hospitals, including representatives of the consumers of hospital services.

The Council, in its annual meeting, continued to play its usual role in formulating recommended policies for assistance to the division, as provided by Chapter 395.10, Florida Statutes. Problem situations were discussed and the Council recommended specific action to be taken by the State Board of Health.

During the year a booklet, *Pyogenic Hospital Infections—A Guide For Control,* was prepared by the Bureau of Preventable Diseases and distributed to hospitals within the state.

Within staff limitations, this division has provided educational material, advisory services and repeated consultations with hospital administrators, architects, builders and others. The need to broaden these services is keenly felt in the division's desire "to provide for the development, establishment and enforcement of standards: for the care and treatment of individuals in hospitals and, for the construction, maintenance and operation of hospitals, which, in the light of advancing knowledge, will promote safe and adequate treatment of such individuals in hospitals." (Chapter 395, Florida Statutes).

NURSING HOME PROGRAM

There was a pronounced increase in the workload of the nursing home licensure program during 1960 as evidenced, in part, by a 70 per cent increase in the number of project plans that were presented to the division for review. Seventy-six proposals, including 51 for new construction and 25 for renovations or alterations to existing structures, were submitted through county health departments as compared to 56 plans for construction analyzed in 1959.

Throughout the year 321 homes were granted licenses under the statutory nursing home law. This number embraces homes for the aged, homes for special services and homes offering nursing care, the majority being in the latter category. By the voluntary closure of 7 homes, the number of licensed establishments was reduced to 314 by the end of

1960 with available licensed beds standing at 9296. Although more licensed homes were operating at the close of 1959 there was a significant increase in the current period in total licensed bed capacity.

Continuous efforts have been made, with the cooperation and assistance of county health departments, to promote and realize better quality nursing home facilities in the state in keeping with regulations, professional standards and practices. Frequently consultations were held with project sponsors, architects, engineers, builders and local public health personnel. Preliminary work has been done in the development of a possible quality grading system for nursing homes in Florida. A manual for nursing home administrators, outlining procedures related to the various elements of patient care, is in preparation.

Short courses for nursing home administrators were held for the second year at Florida State University and Florida A & M University. These programs were again conducted under the joint sponsorship of the Florida State Board of Health, Florida Nursing Home Association, State Department of Public Welfare and state universities. They drew respectively approximately 200 nursing home administrators from white homes and about 50 from colored homes. These activities are particularly noteworthy in that they may have been somewhat responsible for a noticeable improvement in the operation and care offered in many homes in the state.

To provide county health departments with an opportunity to resolve problems attendant to the enforcement of legal stipulations, a 2-day workshop was held in Jacksonville. Seventy persons from the medical, public health nursing and sanitarian disciplines participated. Suggestions and recommendations were received for program planning, the development of standards and the revision of the nursing home rules and regulations.

Advisory memoranda circulated among county health departments included suggested procedures to assist them in their nursing home activities and interpretations of regulations. Principal liaison work in the nursing home licensure program was concerned with conferences with the Florida Nursing Home Association, attending district meetings of the organization and maintaining relationships with the USPHS, State Department of Public Welfare, State Board of Nursing, Florida Nurses Association and allied bureaus and divisions involved in the multiple aspects of the program. Communications lines also were maintained with the Florida Development Commission and the State Hotel and Restaurant Commission for mutual assistance purposes. A major meeting attended was the American Nursing Home Association Conference held in Washington, D.C. in July.

All the consultants in the Division of Public Health Nursing continue to work in and with the nursing home program. The consultant services which provide assistance to county health departments on nursing home problems are essential to the administration of this section of the division.

In addition, public health nursing consultants helped to plan and participated in the courses for nursing home administrators. A substantial amount of time is also being devoted by this division to the preparation of a reference manual for nursing home administrators. (See report of Division of Public Health Nursing in this volume.)

During 1960 personnel of the division co-authored the report of a survey of nursing homes and homes for the aged in Florida. Information from this report was included in the report from Florida to the 1960 White House Conference on Aging.

TABLE 41

HOMES LICENSED UNDER FLORIDA NURSING HOME LAW BY COUNTIES—1960

COUNTY	TYPE OF FACILITY				BED CAPACITY			
	Nursing Homes	Homes For The Aged	Homes For Spec. Serv.	Total Number	Nursing Homes	Homes For The Aged	Homes For Spec. Serv.	Total Number
Alachua	2	1	.....	3	48	11	.....	59
Bay	1	1	.....	2	85	10	.....	95
Brevard	4	1	.....	5	83	42	.....	125
Broward	12	.....	2	14	367	.....	39	406
Clay	1	.....	.....	1	18	.....	.....	18
Columbia	1	.....	.....	1	12	.....	.....	12
Dade	37	12	.....	49	1,987	349	.....	2,336
Duval	25	9	.....	34	722	84	.....	806
Escambia	5	1	.....	6	97	19	.....	116
Hamilton	1	.....	.....	1	8	.....	.....	8
Hardee	.....	1	.....	1	.....	24	.....	24
Highlands	2	.....	.....	2	36	.....	.....	36
Hillsborough	28	6	3	37	973	126	61	1,160
Holmes	1	.....	.....	1	36	.....	.....	36
Indian River	2	.....	.....	2	60	.....	.....	60
Lake	3	3	.....	6	64	29	.....	93
Lee	2	1	.....	3	94	14	.....	108
Leon	1	.....	.....	1	27	.....	.....	27
Levy	.....	1	.....	1	.....	13	.....	13
Manatee	4	4	.....	8	145	15	.....	160
Marion	2	.....	.....	2	38	.....	.....	38
Okeechobee	.....	1	.....	1	.....	10	.....	10
Orange	10	.....	.....	10	269	.....	.....	269
Osceola	4	3	.....	7	76	40	.....	116
Palm Beach	12	5	.....	17	390	79	.....	469
Pinellas	28	4	.....	32	945	77	.....	1,022
Polk	16	7	.....	23	329	184	.....	513
Putnam	4	1	.....	5	85	10	.....	95
St. Johns	3	3	.....	6	71	45	.....	116
St. Lucie	1	3	.....	4	17	41	.....	58
Sarasota	6	.....	.....	6	204	.....	.....	204
Seminole	5	3	.....	8	74	85	.....	159
Sumter	1	.....	.....	1	25	.....	.....	25
Suwannee	1	.....	.....	1	16	.....	.....	16
Volusia	14	3	2	19	453	41	82	576
Washington	.....	1	.....	1	.....	13	.....	13
SUBTOTALS	239	75	7	321	7,854	1,361	182	9,397
CEASED OPERATION IN 1960								
Dade	4	1	.....	5	87	12	.....	99
Hillsborough	.....	1	.....	1	.....	9	.....	9
Putnam	1	.....	.....	1	25	.....	.....	25
SUBTOTALS	5	2	.....	7	112	21	.....	133
TOTALS	234	73	7	314	7,742	1,340	182	9,264

DIVISION OF CHRONIC DISEASES

J. E. FULGHUM, M.D.
Director

The Cancer Control Program is concerned primarily with providing special services to the medically indigent cancer patient through the 22 tumor clinics of the state and hospitalization of the medically indigent cases when found, through the hospital care program. The value of early diagnosis is stressed. An active educational program has been in effect. Much attention has been directed to program planning, program evaluation and special programs of operational research.

The Diabetes Control Program performs its function through insulin distribution to the medically indigent, organized diabetes casefinding activities and provision of educational programs for the medical professions and the public.

The Heart Disease Control Program serves heart patients through established heart clinics and rheumatic fever prophylaxis programs, public health education and seminars for physicians and para-medical professions.

The chronic disease programs are planned and frequently coordinated with those of official and voluntary agencies at national, state and local levels.

CANCER CONTROL

Cancer remained the second leading cause of death in Florida taking its toll of 7719 Florida residents in 1960. The cancer mortality rate increased from 132.1 in 1950, to 155.9 deaths per 100,000 population in 1960. Cancer continues to be one of our greatest public health problems.

The cancer control program was carried on in a closely coordinated manner with the American Cancer Society (ACS), Florida Division, the Florida Cancer Council, the county health departments, the state and county medical associations and the U. S. Public Health Service.

During this year a long range cancer control program plan was formulated. Consultants in cancer from in and out of the state met to confer with the Florida State Board of Health authorities as to program planning and evaluation.

A list of the 22 tumor clinics throughout the state is shown in Table 42 with new cancer cases and total cancer cases seen in each tumor clinic during 1959 and 1960. The tumor clinics are staffed by private physicians of the community who serve without compensation. Ancillary personnel, such as tumor clinic secretaries, typists and tumor registry secretaries are paid by the ACS, Florida Division, and the State Board of Health. Volunteer workers also assist in the operation of the clinics without compensation. During the year a new tumor clinic was formed at Fort Walton

Beach in Okaloosa County. During the year 20 of the 22 tumor clinics were visited and inspected.

Personnel requirements have increased as the tumor clinic patient load has grown. These requirements have outstripped the ability of the State Board of Health to furnish funds for positions for areas where additional clerical help is needed.

Minimum requirements for tumor clinics embrace the assigned professional and clerical staff, records, the maintenance of the tumor registry and the case follow-up system. Tumor registry supplies and materials are furnished by the ACS, Florida Division, and the State Board of Health.

Medically indigent patients who are known to have or suspected of having cancer are referred to the tumor clinic by a physician. Fees are paid for out-patient diagnostic laboratory services and diagnostic x-ray procedures.

If hospitalization is required for treatment, and the patient presents a reasonably good prognosis, he may be admitted under either the Hospital Service for the Indigent or the Public Assistance Recipients programs for the necessary treatment.

Reports indicate that there were 7719 deaths caused by cancer in 1960, an increase of 500 over 1959. It is estimated that there are about 25,000 cancer cases now living in Florida.

During November 1960, a 3-day Southeastern States Cancer Seminar was held in Orlando. This seminar was co-sponsored by the Orange County Medical Society, the ACS, Florida Division, and the State Board of Health. About 400 physicians were in attendance at this meeting.

New audio-visual educational material on cancer has been added to the Audio-Visual Library. This is available on loan to lay and professional groups upon request.

The Community Cancer Demonstration Project is now studying the frequency with which cancer of the cervix of the uterus is found in recipients of Aid to Dependent Children. This study has been made possible by a special grant from the USPHS, and is being conducted with the cooperation of the State Department of Public Welfare and the county health departments.

The following is a summary of results in Dade County to date which are not as yet complete: Of 1039 patients screened in Dade County representing 40 per cent of the ADC recipients of that community, 85 were referred to tumor clinics because of atypical, suspicious or positive findings on the Papanicolaou smear, a special cancer detection technique. To date, 25 cases of definite cancer of the cervix previously unknown have been discovered in this group. Twenty-two of these were very early cases (carcinoma in situ) and 3 were reported as invasive (late). Only 1

of these 25 is reported to be an advanced case and presents a poor prognosis. Preliminary results indicate that 2.4 per 100 of the population studied have yielded cervical cancer.

During the coming year this casefinding demonstration program will be conducted in Monroe, Broward, Palm Beach and other southern counties of the state. The project will demonstrate the need for community cervical cytology survey programs to reach similar low socio-economic groups of the state.

The care of the advanced cancer patient is one of the great problems facing the communities of the state. Under the present regulations, little or no hospitalization can be offered these patients unless there exists a medical or surgical emergency requiring hospitalization. Equally urgent is the need for outpatient cancer treatment services. The availability of such service would result in a decrease in the number of hospital admissions of cancer cases and a reduction in the length of hospital stay.

TABLE 42

TUMOR CLINICS AND SERVICES

	FIRST EXAMINATION		TOTAL VISITS	
	1959	1960	1959	1960
Alachua	41	32	100	108
Bay	49	70	559	606
Broward	108	94	505	432
Duval	397	463	4,162	4,457
Escambia	186	217	1,514	1,548
Fort Myers	44	37	51	36
Jackson Memorial	256	314	2,199	2,556
Leon	138	133	1,096	1,139
Manatee	17	13	209	185
Marion	40	67	43	87
Mt. Sinai	121	174	620	784
Okaloosa	.....	.....	.....	.....
Orange	130	164	1,305	1,162
Palm Beach (St. Mary's)	175	152	1,013	967
Pinellas	275	316	1,009	1,189
Polk	194	181	1,269	1,223
St. Vincent's	84	100	1,103	1,282
St. Francis	73	88	785	742
Sarasota	28	33	204	212
Tampa	150	213	1,551	3,095
University of Florida	159	548	512	1,929
Volusia	20	26	30	135
TOTAL	2,685	3,411	19,892	23,771

DIABETES CONTROL

Diabetes was again among the 10 leading causes of death in Florida. It is interesting to note that when compared to the national death rates for diabetes since 1950, Florida has experienced a significantly lower rate in every year. The average rate per 100,000 population for the state from 1950 to 1959 was 13.1 compared to 16.0 for the nation. The control program in 1960 was limited almost entirely to health education activities.

It is estimated that there are approximately 100,000 diabetics in

Florida, of whom half are unaware of their conditions. Consequently, emphasis continued to be placed on finding the unknown diabetic.

Testing relatives of the indigent diabetics by many of the county health departments was one of the several ways in which new cases of diabetes were found. The names of brothers, sisters, parents and children are obtained from the known indigent diabetics, and then arrangements are made whereby these individuals can report to the county health department for postprandial blood sugar detection tests.

Surveys during National Diabetes Week to uncover the unknown diabetic were sponsored by the lay diabetes societies, civic organizations, military establishments, county medical societies and county health departments throughout Florida. The State Board of Health offers assistance to these groups in the way of consultation, publicity and supplies.

Insulin was supplied to 2826 individuals this year (2741 in 1959). A total of 32,145 vials of insulin were distributed at a cost of $37,400.

Population changes in many of the counties necessitated a reapportionment of the insulin funds to the county health departments. Still, the funds available for insulin were found to be short by one-half of the actual need.

Educational activities were strengthened by the procurement for the audio-visual library of 2 copies of the film entitled "Diabetes and You, Too."

A diabetes exhibit proved to be of much value in the educational phase of the diabetes program. This exhibit illustrates the importance of performing blood sugar tests on relatives of diabetics. A genetic chart shows how diabetes tendencies are transmitted by parents to their children. This exhibit "Diabetic Blood Line Screening," was displayed at the meetings of the Florida Osteopathic Association, Florida Congress of Parents and Teachers, Florida Public Health Association and the Florida Diabetes Association.

The monthly bulletin, *Timely Topics,* increased its circulation to 4500, an increase of 300 over the previous year. This publication is intended to help the diabetic learn more about how to care for his condition, thereby supplementing the information that he receives from his family physician.

The leaflet entitled "Are You Related to a Diabetic" was used extensively in connection with diabetic surveys. A third printing of this popular leaflet was necessary near the end of the year.

In cooperation with the Florida Medical Association, The University of Florida College of Medicine and the Florida Clinical Diabetes Association, assistance was given to a diabetes seminar held at Miami Beach in October 1960. There were 100 physicians who attended this meeting. One night during the seminar it was open to the general public and the attendance was approximately 125.

Reporting of new cases found is incomplete due to the manner in which activities of local health units are recorded. It is anticipated a revised record form will be developed and approved.

HEART DISEASE CONTROL

Diseases of the cardiovascular system were the cause of more than 50 per cent of all deaths in Florida in 1959. Preliminary figures for 1960 are similar. These deaths are subdivided as follows:

TABLE 43

	Per Cent of Florida Deaths	Death Rate (per 100,000)
Arteriosclerotic and coronary heart disease	28.6	267.0
Cerebrovascular disease	11.5	107.8
Hypertension	4.0	37.7
Rheumatic fever and rheumatic heart disease	1.1	10.1
Congenital heart disease	0.6	5.5
Other cardiovascular diseases	4.9	45.5

Cardiovascular disease is a major cause of morbidity throughout the state.

Improvement of these grim statistics will result from an aggressive, modern public health program for the control of heart disease. The fact that further cardiovascular research and epidemiological study is needed does not justify a weak and ineffective public health program in this field.

Casefinding of early disease with prompt treatment can often avert more serious consequences of the disease. Rehabilitation can often return individuals to a useful and brighter life. Health education regarding diet and obesity can lead to a longer and healthier life.

Community health services must be continually reoriented toward chronic disease including cardiovascular disease.

EDUCATION

The Seventh Annual Cardiovascular Seminar for Physicians was held in Jacksonville February 18-20, 1960. This seminar, co-sponsored by the Northeast Florida Heart Association, the Division of Postgraduate Education, University of Florida College of Medicine and the Florida State Board of Health, featured many outstanding authorities in this field.

The Sixth Biennial Cardiovascular Seminar for physicians was held in Miami in April 1960. This professional education program was co-sponsored by the Greater Miami Heart Association, the Florida Heart Association and the State Board of Health. Three hundred physicians attended.

The Audio-Visual Library of the State Board of Health has added

several new films in the cardiovascular field which are available to both lay and professional persons. A mobile heart library has been in circulation among the smaller hospitals, remaining in each hospital for a 3-month period.

SERVICES

Efforts have been continued toward the expansion and improvement of the Cardiac Clinic system in Florida. Twenty cardiac clinics are available in 13 counties in the state. Additional clinics are needed in several other counties. In general, these clinics provide diagnostic and follow-up service to indigent cardiovascular patients in a specific area surrounding the clinic, usually the county.

The 2 cardiac work classification units—1 in Jacksonville and 1 in Tampa have continued their work throughout the year. However, professional acceptance of such rehabilitation services has been disappointing.

The rheumatic fever program provides prophylactic sulfa and penicillin to the medically indigent rheumatic fever patient in the state. In the current year special emphasis was given to the problem of rheumatic fever prevention by the additional cases brought under prophylactic treatment. A registry keeps current information on all reported rheumatic fever patients, and the county health departments provide follow-up services to ensure that these patients will receive continuing medical supervision and remain on prophylactic medication. At the end of the calendar year 348 persons were listed in the rheumatic fever registry and 77 were receiving prophylactic medication for the prevention of rheumatic fever and rheumatic heart disease.

SPECIAL STUDIES

The first phase of a study of stroke victims initiated in 1959 was concluded. Results revealed a relatively poor prognosis for the stroke patients studied. The treatment programs for the stroke patient were found to be grossly inadequate whether the patient was hospitalized or not. The patients in general were given little or no rehabilitation service. Further study of problems associated with care of the stroke patient are under consideration.

County health departments are increasing public health nursing services to persons suffering from cardiovascular diseases as a result of additional funds made available for program development by the Heart Disease Control Program of the USPHS.

The organization of a state heart disease policy and coordinating council has been planned with the Florida Heart Association.

HOSPITAL SERVICE FOR THE INDIGENT PROGRAM

During 1960, the State Board of Health continued the administration of available county, state and federal funds for the hospitalization of indigent and medically indigent persons. The scope of activities, the

extent of participation by counties and the amount of monies disbursed are reflected in Table 44.

The program consists of 2 major segments—hospital service for the medically indigent and hospitalization care for public assistance recipients. Under both segments hospitalization is provided for persons who become acutely ill or injured, who can be helped markedly by treatment in a hospital, and who are clearly unable to meet the cost of hospitalization from their own resources or those upon whom they are legally dependent.

The Hospital Service for the Indigent was established by an act of the 1955 Legislature and went into effect January 1, 1956. During the first 18 months of operation approximately $500,000.00 of state matching funds were utilized by the few counties participating in the program. At that time most of the counties and many eligible hospitals did not appear to be aware of the advantages inherent in the arrangement whereby an appropriation of county funds based on 50 cents per capita for their population could be matched by state funds for the hospitalization of the indigent and medically indigent.

However, during the biennium July 1, 1957-June 30, 1959, sixty-six counties elected to participate at least for a portion of the period. In this biennium more than $7,000,000 of the $8,000,000 state and county funds budgeted were spent. In the current fiscal year, $3,447,490 of state and county funds were available for the hospitalization of the medically indigent under the state-county portion of the hospitalization program.

Increased hospitalization benefits accrued to public assistance recipients as a result of the action of the 1959 Legislature. The State Board of Health and the State Department of Public Welfare were directed to enter into a contractual arrangement with the Department of Health, Education and Welfare whereby federal funds might be obtained for the implementation of hospitalization of the indigent being served under state welfare categorical programs: namely, Old Age Assistance, Aid to Dependent Children, Aid to the Blind and Aid to the Disabled. As a consequence of this authorization, activity in the joint state-county hospital service to the indigent segment of the program was reduced inasmuch as a percentage of state matching funds had to be allocated for matching federal funds in order to carry on the services for public assistance recipients. The situation was due to the fact that the state legislature did not wish to create new tax monies for the purpose of matching the federal funds available to Florida.

Effective October 1, 1959, the service to public assistance recipients became the second avenue of financial aid that is directed toward the provision of appropriate hospitalization and care for the indigent and the medically indigent residents of the state. It was pursued and expanded during 1960 as represented by the $2,812,500 combined federal and state funds set aside for the treatment of eligible public assistance recipients in licensed hospitals.

Following the enactment of an amendment to the Social Security Act by the U. S. Congress, which became effective October 1, 1960, a series of meetings were held with various groups concerned relative to its implementation in Florida. This amendment makes possible, through federal assistance, a broad program of institutional and non-institutional care for needy persons over 65 who are not on public assistance rolls. However, it has been determined that nothing could be done to develop this service until the forthcoming session of the State Legislature considers the proposal, passes suitable legislation and provides funds for Florida's participation.

On July 1, 1960 the Hospital Service for the Indigent Program was transferred from the Bureau of Special Health Services to the Administration Office of the State Board of Health for a special evaluation study. It remained a part of the Administration Office through the end of the year.

Meetings of the Medical Advisory Committee of the Hospital Service for the Indigent were held in January, April and August. Members of the Advisory Committee for 1960 were H. Phillip Hampton, M.D., Chairman, Edward Jelks, M.D., J. A. Long, M.D., Messrs. Frank Kelly and Arthur Bailey. Meetings of this Committee were held on January 17, April 8, and August 7. At their meetings, members of the Committee considered a number of problems relative to the administration of the various phases of the hospitalization program.

On January 17, members of the Committee approved a revision of the Rules and Regulations for the Hospital Service for the Indigent. They also approved the action taken by the State Board of Health to obtain additional funds for the state-county program and to reimburse the full amount of the appropriations to the counties. Committee members also expressed approval of the procedure of returning authorizations to county health officers for supplementation covering the acute condition of the patient when the diagnosis given was questioned by the State Department of Public Welfare.

In August, the Advisory Committee in joint meeting with the Medical Advisory Committee of the State Department of Public Welfare recommended a budget of $3,285,819 for the hospitalization of Public Assistance Recipients for the next biennium. The Committee also recommended a maximum hospitalization period of thirty days under this program in lieu of the 12 day limit in effect at the time of the meeting. The members adopted a resolution reaffirming the eligibility of cancer patients under this program as well as under the state-county program. Relative to the state-county program, they approved the recommendations presented by Mrs. Anna Lovell who represented the County Welfare Executives, as follows:

1. State appropriation of 50 cents per capita to match 50 cents per capita from counties.
2. That the counties be permitted to submit a plan to the State Board of Health for approval for expenditure of hospital service for the indigent fund (county 50 cents per capita and state 50 cents per capita).
3. That the plan could include such services as: hospitalization, outpatient clinics and visiting nurses.
4. That the law be amended to make it possible that these funds be used for county indigent nursing home care (Not PAR).
5. That counties be permitted a maximum of local determination in selecting services, encouraging greater planning and responsibility at county level. It might be helpful to set up a local advisory committee of physicians to be involved in the medical aspect of the plan.
6. Reinstate the non-resident hospital program.

At the close of the year, 93 of the 153 participating hospitals had established per diem rates at an average of $25.95. This latter figure represents an increase of $1.44 as compared to the average rate in 1959. The remaining 60 hospitals were reimbursed on the basis of actual billing which did not exceed $15.00 per patient per day.

The records and work involved in the administration of this program are voluminous and exacting in detail. Accurate liaison must be maintained with county health departments, the State Department of Public Welfare, participating hospitals and governmental units. As the number of aged persons increases in this state, it may be anticipated that a proportionate increase in the activity of these services will evolve.

TABLE 44
HOSPITALIZATION PROGRAMS
APPLICATIONS PROCESSED AND APPROVED FOR PAYMENT FROM JANUARY 1, 1960 TO DECEMBER 31, 1960

	PAR PROGRAM			HSI PROGRAM*		
	No. of Admissions	Days Hospitalized	Total Payments State & Federal	No. of Admissions	Days Hospitalized	Total Payments State & Local
Total, STATE.	14,198	128,484	$2,872,290.48	14,039	116,262	$2,926,942.10
Alachua	260	2,584	57,158.82	153	1,490	32,993.53
Baker	86	647	15,165.37	22	176	3,611.83
Bay	172	1,590	39,122.95	162	1,321	35,087.96
Bradford	58	487	9,670.95	30	200	3,307.19
Brevard	133	907	18,773.27	346	3,218	70,343.04
Broward	462	3,788	87,802.20	689	7,845	189,223.86
Calhoun	57	395	8,759.41	18	128	3,064.58
Charlotte	72	488	9,502.36	24	243	5,099.91
Citrus	40	400	9,560.11	28	272	6,071.17
Clay	77	590	12,488.58	25	234	4,304.47
Collier	24	249	6,201.65	63	509	13,901.42
Columbia	268	2,199	39,141.64	102	746	13,313.64
Dade	1,706	18,929	480,409.14	1,095	11,882	331,322.97
DeSoto	5	54	1,386.42	12	59	1,215.64
Dixie	31	306	6,086.92	13	127	2,490.12
Duval	953	9,231	200,147.64	2,008	14,665	300,387.51
Escambia	731	6,001	166,036.34	509	5,581	159,015.22
Flagler	19	204	2,863.32	22	266	4,199.04
Franklin	123	638	9,694.59	32	238	3,522.05
Gadsden	153	1,462	30,750.87			
Gilchrist	33	325	6,232.64	8	59	1,163.98
Glades	8	78	1,411.25	24	134	2,212.59
Gulf	50	353	5,805.00			
Hamilton	91	747	11,255.04	20	168	2,734.20
Hardee	52	425	6,961.70			
Hendry	47	469	8,990.34	90	902	9,478.63
Hernando	40	361	6,336.82	26	294	5,458.22
Highlands	67	543	9,998.62	39	469	8,603.01
Hillsborough	1,109	10,692	217,903.80	1,746	12,912	364,571.17
Holmes	210	1,515	26,152.92			
Indian River	116	900	21,639.40	24	127	3,191.48
Jackson	291	2,381	47,063.37	5	159	3,121.66
Jefferson	30	294	7,471.32	11	90	2,211.01
Lafayette	40	270	5,024.60	4	24	463.59
Lake	157	1,197	26,556.18	220	1,762	37,908.90
Lee	149	1,271	36,328.14	5	65	1,921.75
Leon	271	2,399	58,055.79	198	1,655	39,916.79
Levy	115	1,256	23,395.39	40	414	6,071.11
Liberty	46	409	8,283.62	7	35	844.15
Madison	174	1,510	31,421.78	19	192	3,648.16
Manatee	209	1,985	48,675.86	95	1,170	29,224.07
Marion	285	2,404	55,157.14	119	1,487	35,251.98
Martin	63	554	14,381.03	36	320	8,163.45
Monroe	117	1,339	30,998.98	122	1,059	27,174.97
Nassau	79	778	14,721.84	72	716	13,275.39
Okaloosa	216	1,550	34,002.01	177	1,187	27,872.15
Okeechobee	40	399	7,116.42	6	58	1,253.34
Orange	524	5,235	115,069.53	820	8,874	202,070.07
Osceola	90	682	9,975.15	52	387	5,975.96
Palm Beach	399	3,340	85,911.78	867	7,845	212,313.78
Pasco	62	491	9,584.07	98	777	14,700.45
Pinellas	630	6,844	155,069.45	665	7,948	186,459.94
Polk	431	4,127	76,418.17	1,921	5,098	230,482.82
Putnam	269	1,860	34,296.27	109	988	18,413.54
St. Johns	133	1,197	31,507.76	109	1,068	27,414.28
St. Lucie	101	795	20,914.97	84	1,155	32,317.91
Santa Rosa	236	1,692	42,114.02	75	718	18,078.52
Sarasota	104	893	24,425.02	159	1,591	42,321.71
Seminole	183	1,675	40,065.65	84	818	19,593.99
Sumter	69	549	12,793.33	34	261	4,799.31
Suwannee	288	2,205	34,518.66	82	552	9,011.44
Taylor	88	647	18,868.26	42	441	11,872.05
Union	111	905	13,852.52	16	111	2,102.33
Volusia	367	3,928	93,837.01	314	2,734	65,698.48
Wakulla	44	385	9,199.89	4	19	408.42
Walton	301	1,752	31,246.03	38	219	4,696.20
Washington	233	1,729	30,559.39			

*Those hospitalized in 1959 with bills in the amount of $910,972 which were processed in 1960 are not included.

BUREAU OF SANITARY ENGINEERING

DAVID B. LEE, M.S., Eng.
Director

SIDNEY A. BERKOWITZ, M.S., Eng.
Assistant Director

CHARLES E. COOK, C.E.
Assistant to Director

The overall program of this bureau involves the control and improvement of the environment in which the present and future population of the state, together with its many annual visitors, will reside and play. Specifically, the programs in the air-water contact phase of the environment involve water supply, waste disposal (both domestic and industrial), swimming pools and bathing areas, shellfish, stream pollution abatement, air pollution abatement and bedding materials control. All of these programs with the exception of air pollution abatement which is the most recent responsibility and the bedding materials control have been a concern of this bureau for the past decade or more. During the year 1960 the bureau and its staff were still "putting out fires" rather than being able to devote efforts toward expansion of programs in keeping with the needs of a growing state.

The professional staff of the bureau consists of 28 sanitary engineers, 3 biologists and 7 chemists, with 37 per cent of the staff assigned to permanent field offices throughout the state. During recent years while the state population has continued to expand rapidly the technical staff has tended to remain static. It has been more and more evident with each passing year that regardless of the competency of the available staff, it is inadequate as to numbers of personnel to properly fulfill the basic responsibilities imposed on this bureau and its divisions.

The turnover in staff both in professional and clerical categories was higher than desirable and the effects were felt in several ways. New professional staff in all categories: engineers, chemists and biologists, must be indoctrinated in the policies and programs of the bureau and the period of indoctrination temporarily reduces their effectiveness and thus their productiveness. Changes in clerical personnel have caused serious delays, though not necessarily complete breakdowns in continuity of the paper work phase of our operations.

Early in the year a new regional engineer was employed for the southwest area to replace the man who went with the Sarasota County Health Department. This individual was given indoctrination in the central office prior to his assignment.

The engineering staffs of 2 counties, Hillsborough and Pinellas, were increased by the addition of assistant engineers. Orange County was without a sanitary engineer for half of the year while Brevard County joined

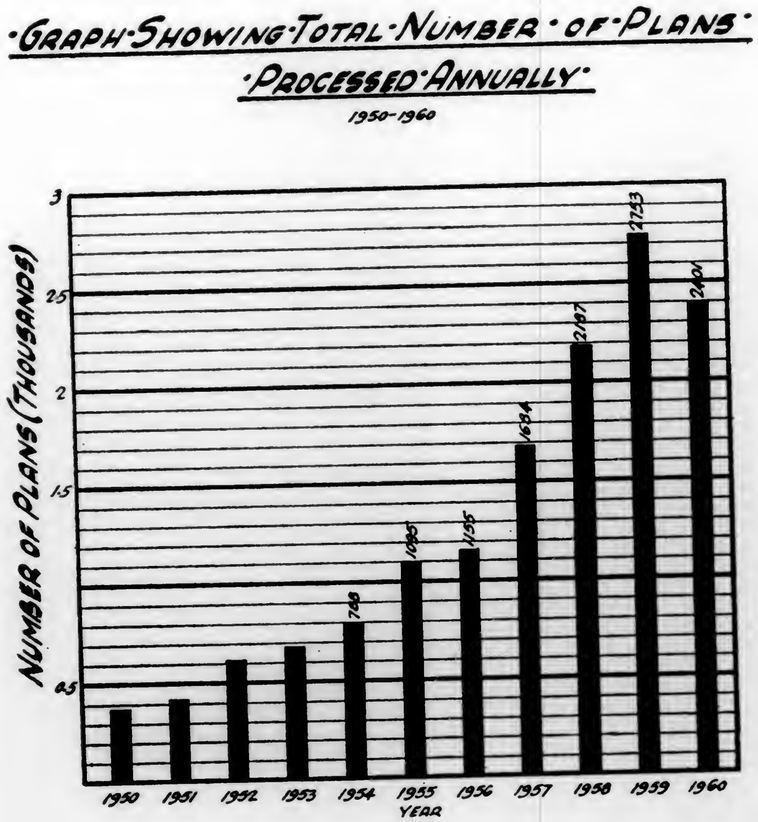

FIGURE 7

the list of those counties which have sanitary engineers on their staff. The engineer for the latter county was given a brief period of indoctrination in the central office, but the engineer for Orange County did not have an opportunity to avail himself of this service. The close liaison so necessary in the development and conduct of programs in the various counties as well as the regions was maintained through visits by members of the central staff to the respective counties or regions as well as by visits of the county and field personnel to the central office. In spite of the advances made in staffing the counties, the work load in these areas has so materially increased that it has been only possible to attempt to maintain the status quo and there has been little opportunity for such personnel to move ahead in their programs. Regional engineers still lacked clerical staff and assistant engineers, and their full potential was thus not achieved.

The stream sanitation program of west Florida mentioned in the 1959 Annual Report was activated early in the year, first staffed with a chemist and biologist and later an engineer and stenographer were added to complete the staff as initially planned. The work of this personnel has fulfilled the need which was previously recognized. The information gathered and work accomplished has multiplied efforts in the western portion of the state. Toward the close of the year the engineer in the Pensacola facility was assigned additional duties as regional engineer for 4 counties. At the same time a realignment of the 2 northern regions was made in order to improve the effectiveness of the personnel assigned thereto by reducing the total number of counties to be served and the distances required to be traveled.

Those portions of this report which follow and which reflect the activities in the fields of water and waste water and other programs will indicate that while there may have been either a slight increase or decrease in numbers of items or in dollar volume of projects, the work load for 1960 is equivalent to that of 1959 and substantially above any year previous to that. In an effort to effect a more efficient control of the tremendous volume of correspondence, reports and documents with which we are daily concerned, a new filing system was undertaken. This change involved a considerable expenditure and, while the process of moving from 1 system to the other will require some time, the ultimate result will be greater facility in administrative procedures.

The second annual engineering conference to which all county, regional and other professional staff were invited, was held at the beginning of the year. This conference procedure has again provided a medium for ready exchange of ideas in the development and continuance of existing programs as well as potential new programs. As at the previous conference, recommendations were made and, where appropriate, action was taken to implement such recommendations. It is not suggested that this conference resolved all problems but where the personnel are given an opportunity to voice their opinions it is hoped that the procedure might lead to early solution of at least the most serious administrative and technical problems.

The bureau during the year cooperated with the U. S. Public Health Service in the establishment of National Water Quality Network sampling stations at 2 locations on interstate waters. One station was established at Chattahoochee on the Chattahoochee River and, while the physical operation of the station is handled by non-agency personnel, the bureau staff provides technical advice and assistance. The second station was established on the Escambia River at Century and this station is operated and maintained by the personnel of our Pensacola stream sanitation program. It is anticipated that the data collected at these stations will be of great value to programs concerned with water quality management in the areas through which the respective rivers flow.

In conjunction with the U. S. Study Commission, Southeast River Basins, the bureau undertook to gather specific water resource data and provide information to be incorporated in a report generally concerned with the economic well-being of an area of which some 32 counties of Florida form a part. A contract was entered into between the State Board of Health and the Study Commission, and funds were provided for the employment of a sanitary engineer and stenographer. While fulfilling the requirements of the Study Commission, these additional personnel have and will continue to provide this bureau with information concerning some northern and all western counties which should materially assist our future programs in this area.

The USPHS Taft Sanitary Engineering Center held a 1-week Summer Training Institute at Florida State University in Tallahassee to which were invited people from industry as well as government, and lay people who had an interest in water pollution, radiological or air pollution programs. This institute, in effect a condensed version of training programs normally given at the Sanitary Engineering Center in Cincinnati, was designed to serve several southeastern states. This bureau and its staff cooperated with the USPHS both in the administrative requirements involved in location of the school and the provision of facilities and to some degree in the program as instructional staff members. As many members of the bureau staff as could be spared attended the institute and thereby gained considerable technical knowledge.

Responsibility for the radiological health program which was conducted by this bureau on a limited basis involving the collection of water samples for analysis of gross radiation from throughout the state was reassigned by the State Health Officer late in the year. This bureau retained responsibility for determination of sampling locations concerned primarily with the environment and also evaluation of the reports of laboratory analyses performed on the samples collected. Because of the limitations of both time and personnel, only 300 samples were analyzed. These were collected from all areas of the state, principally from lakes, streams, water supply wells and rainfall.

As the need for public awareness and citizens' responsibility in the area of water quality management becomes more urgent in this rapidly growing state, members of the staff have continued and increased their promotional efforts to alert all the citizenry. The bureau director was a member of the Steering Committee of the National Conference on Water Pollution which was held in Washington in December and also a program participant. Other members of the staff also attended the Conference. The bureau director also was an invited participant in a study conference held at Harvard University and concerned with graduate curricula for sanitary engineers.

SHELLFISH AND CRUSTACEA PROGRAM

During 1960 the oyster harvesting and processing industry and the crabmeat processing industry experienced a demanding market for these products at a most satisfactory price. Although there was a marked decrease in the number of shellfish plants in operation over the past year, production was at a high level and remained so throughout the season. There was evidence of increased alertness to responsibility for control by staff members and county health department personnel in pace with increased production resulting in many improvements toward quality production. The implied responsibility of the industry for quality products, and its high sanitary quality, was well accepted by all producers as evidenced by improved conditions in and around premises, cooperation with controlling agencies, interest and alertness to compliance with health regulations, and a noteworthy increase in overall percentage rating received on the USPHS annual survey.

As heretofore, the number of oyster producers, the quantity produced and the control activities were concentrated in the Apalachicola Bay area. Of the 85 houses for all classifications of activity certified, 38 were located in this general area. Four new shucking plants were constructed and 7 were extensively remodeled for increase in capacity. As another increase in this concentration to area, 54 certified houses in West Florida were located in six counties. The remaining 31 were located throughout the state in 10 coastline counties. The Department of Interior's annual statistical report on production listed the Apalachicola area as producing 160,991 gallons of shucked oysters and 72,593 bags of shellstock oysters having a wholesale value of over $900,000.00, and as being approximately 95 per cent of the total state production.

The modern municipal sewage treatment plant placed in operation for Apalachicola has resulted in a considerable esthetic improvement, and greatly decreased the pollution hazard to the oyster growing areas of the Bay. A decrease, or shrinking in, of closed and condemned areas towards the mouth of the river may be anticipated following a detailed bacteriological survey now in progress. This city may rightfully look with pride on this new utility and its value to their main local industry. The new Marine Laboratory dedicated during 1959 and in operation through its first complete year, has also been most beneficial to the program. Bacteriological analyses are made locally when desired, resulting in quick action on polluted areas and sanitary controls, an advantage recognized by the industry. Although unable to realize the maximum capacity of the laboratory due to limited personnel, it is considered indispensable.

An improvement in packaging of processed oysters was initiated by the industry. The sealed metal containers in pint capacity with plastic view-end windows are now widely used, assuring freedom from contamination in handling, icing and transportation. Extensive encouragement during this season was made for use of strictly tamper proof, detectable-if-removed type of covers or lids for all commercial containers. Use of these covers is to be mandatory by the industry during the next season. A successful accomplishment of USPHS evaluation recommendations for program improvement was realized. This resulted in receiving for the entire shellfish industry control program a 1960 evaluation rating of 93.18 per cent as compared to the previous year's rating of 85.10 per cent. Close liaison and cooperation with the USPHS Interstate Cooperative Program was maintained with 62 of the 85 oyster plants certifications being for interstate shipment.

Production of other types of shellfish products was less sensational. Scallop production was at a low ebb due to scarcity of the bay scallop. Only 15 plants were certified and operated intermittently during the year, with a total state production of approximately 6000 gallons. However, an extensive bed of sea scallops (calico) was located off the east coast of Brevard-Indian River-St. Lucie Counties, causing considerable speculation and preparation for the economical development of the scallop processing activities in that area. By the end of the year production in any commercial quantity had not developed, however there remained good prospects for 1961. Eight certifications were issued for processing clams, principally in Dade, Lee and Sarasota Counties. Approximately 3000 gallons were reported as marketed.

The principal and all important problem in shellfish activity, especially oysters, throughout the state continues to be that of pollution attributed to population growth along the coastline. With a continuing increase in population density and growth of sewage treatment plants using the rivers, streams, bayous and bays as receiving waters for the dilution of treated wastes, a constant increase of potentially dangerous pollution effect on oyster growing areas can be anticipated. An increase in patrolling and enforcement for protection against illegal harvesting in closed or condemned waters becomes essential. Many requests are being received to approve commercial areas which require sanitary and bacteriological surveys beyond the capacity of existing bureau personnel to perform. An ultimate need is a complete detailed and mapped survey of the total coastline from Fernandina to Miami, and from Ft. Myers to Pensacola depicting sources of pollution and open and closed waters for the commercial harvesting of oysters.

Crabmeat processing plants in operation increased in number from 33 in 1959 to 37 in 1960. Production remained high and fairly stable throughout the year, with a plentiful supply. Approximately 15 million pounds of green crabs (in shell) were caught, yielding some 900,000 pounds of marketed processed crabmeat. A new plant was under construction in Quincy, another in Apalachicola and 2 new plants of modern

construction and greater capacity were built in Panacea, replacing existing plants. Two other plants in the west Florida area were remodeled for increase in capacity. Processing rooms in 4 plants were air-conditioned, and it is anticipated that all plants in west Florida will be air-conditioned during the next year. A noticeable decrease in bacterial counts results from air-conditioning, and encouragement for such installation in all crab plants is being made.

Related activities included advisory memoranda to county health departments on recommended procedures for higher sanitary quality production in both the shellfish and crustacea industry. A study was continued on a revision of regulations of the sanitary code toward conformity with national standards and practices. Instruction courses were conducted in the Franklin County area for processors during the early part of the season. A program of liaison was continued, maintaining relationships with all related agencies. Two staff members attended the Gulf States Shellfish Conference conducted at Mobile, Alabama, and the Shellfish Workshop Conference at Virginia Beach, Virginia. The certification of crabmeat processing plants to the health departments of Maryland and New York City, with an exchange of laboratory analyses on samples, was continued.

Table 45 summarizes the activities of bureau personnel in this program, but does not reflect the activities and invaluable assistance of the county health department personnel in those counties other than Franklin and Wakulla where shellfish and crustacea plants are located.

TABLE 45

SUMMARY OF ACTIVITIES—SHELLFISH AND CRUSTACEA PLANTS

Description	Operating Certificates Issued	State Visitations Made	New Plants Constructed	Plants Remodeled
Oyster shucking and packing	60	433	4	7
Oyster shellstock only	19	30	.....	.....
Scallop shucking	15	15	.....	.....
Clam shucking	8	.....	.....	.....
Crabmeat processing	37	161	4	2
Repacker	8	15	.....	.....
Reshipper	.....	.....	.....	.....

RELATED SHELLFISH AND CRUSTACEA ACTIVITIES

Oyster growing area waters samples bacteriologically tested	78
Oyster meat samples bacteriologically tested	6
Crabmeat samples bacteriologically tested	72
Plant water samples bacteriologically tested	95

SUBDIVISION SANITATION

The advisory program directed toward assistance to housing and community developments, subdivision developers, lot sales enterprises

and county health departments continued through the year by providing consultation services, review of subdivision analyses, recommendations for adequate public health utilities and exercising supervision over the environmental health aspects of subdivision planning and home construction. This program was originally instituted in cooperation with the Federal Insuring Mortgage Agencies to assure the responsibility for individual and community sewage disposal and water supply facilities. During the last few years this activity in the bureau has continuously declined as the FHA now depends to a major degree on county health department approval for these individual facilities. The majority of the county health departments now review all new subdivisions within their area of jurisdiction and assume this responsibility for approval of individual home facilities.

The number of new subdivisions with analyses referred to the bureau by or through county health departments during 1960 totaled 52, or approximately one-half of those received during the previous year. These consisted of an approximate total of 10,481 lots or proposed homesites for which the proposed use of individual sewage disposal systems (septic tanks) were concurred with on 976 lots, with 91 considered unsatisfactory due to soil characteristics, and sanitary sewerage facilities recommended to serve 9414 lots within 22 subdivision developments.

The Veterans Administration, by policy, continues to require a favorable opinion by the bureau for individual sewage disposal and water supply on all homes receiving a VA guaranteed mortgage. From this cooperative service 265 cases throughout the state, with the exception of Dade County, were processed as satisfactory on review of final inspection reports. According to reports received Dade County also approved 307 cases for the federal agencies which involved individual sewage disposal facilities.

Although activity in this program has declined, now requiring approximately one-fourth time of 1 staff engineer, the promotion of high quality public works, in keeping with the needs of population trends in community or mass housing development, has gained much for the future. Opposition to and unfavorable recommendations for septic tank systems and individual wells, as proposed for wide and indiscriminate use in progressive housing developments, has led to provision of many necessary public utilities. Conferences, conducted with developers, builders, consulting engineers as well as with housing, zoning and public officials at local, state and federal levels have been most productive. Many known cases of developers of quality houses or communities could be cited who no longer seek health department approvals for use of individual facilities as was done heretofore, but now include in their financing and planning, provisions for public utilities.

BEDDING ACT ADMINISTRATION

The Bedding Inspection and Enforcement Program continued during this year as a progressive activity with an anticipated increase in revenue

reaching a total of $105,140.00 in fees collected. An outstanding occurrence was the annual meeting of the National Association of Bedding Manufacturers held in Miami Beach for the first time. Meeting jointly at the convention was the Association of Bedding Law Officials consisting of 25 officials from other states having a bedding law. Bureau personnel in this program served as host to this group. From this meeting it was apparent that the administration, inspection and enforcement of the bedding regulations in Florida is uniformly consistent in regard to efficiency and effectiveness with any state having a comparable law.

In 1960 the enforcement of statutory provisions resulted in the registration of a total of 5779 establishments within the bedding industry. This total includes for various classifications 1044 manufacturers, in state and out-of-state, 403 renovators and 4332 retail stores offering items of bedding for sale. Receipts from registration fees as prescribed by the law totaled $26,100.00 with $53,350.00 being received from the sale of authorized bedding inspection stamps. This represents approximately 2.5 million 1-cent inspection stamps and 1.5 million 2-cent inspection stamps.

Increased revenue and activities have resulted more from the 1959 legislative amendment to the law than from increased productivity and sales by the industry. This amendment brought within the scope of the law all processed filling materials in addition to finished items of bedding, thus increasing the registration fees and the use of inspection stamps. This action has strengthened the program and placed the responsibility for certification of filling materials on the processor rather than on the user or manufacturer of bedding.

Several changes have occurred in the organization of personnel in this program, including the addition of one clerk for record keeping. These changes have increased the overall efficiency and implemented the liaison between the main office and field offices. The position of field supervisor was unfortunately vacant during most of the year pending selective replacement.

The record of activities of the 5 regional offices reveals that 4876 accredited inspections of establishments were made with 19,474 items found in some condition of noncompliance. Of these, 2755 were considered serious enough for "off sale" action pending corrections or returned to the manufacturer. A special concentrated drive was directed on eliminating a common misrepresentation by the manufacturers of down-filled bed pillows. Several hundred pillows labeled as containing down, but found to contain feathers, or mixtures of down and feathers, were ordered returned to the manufacturer.

Laboratory analyses were conducted on a total of 396 selected samples requiring a total of 1697 various types of physical and chemical tests for accurate determinations. Additional office and laboratory space was provided for the bedding program at the Orlando laboratory.

Educational activity continued throughout the year to the industry

and to related or interested groups. Nine exhibits with lecture demonstrations were presented to women's club meetings and county home demonstration groups. Twenty bedding kits of informative material were supplied to various persons engaged in teaching home economics, and to county demonstration agents. The special booklet entitled "When You Buy Bedding" was distributed to 810 interested persons, in addition to a large number distributed at the group demonstrations.

The total number of establishments registered, and thus subject to inspections, with the anticipated increase in total sales, present the critical need for 1 or more additional field representatives. The division of the workload to the existing 5 regions renders it practically impossible to obtain the desired inspections and enforcement.

AIR POLLUTION CONTROL PROGRAM

This was the first full year of operation of the air pollution control program under the Bureau of Sanitary Engineering.

The program consists of 2 phases: rendering statewide technical assistance to counties and operation of the control district.

The Air Pollution Control Commission, at the end of 1960, consisted of the following members: E. T. Casler, D.Sc., William Fort, E. R. Hendrickson, Ph.D., A. P. McIntosh, F. Lynn McNeer, Willard D. Miller, Raymond E. Parks, M.D., Ledley H. Wear and George F. Westbrook, Ph.D.

During the year the following changes took place in the membership: Mr. F. Lynn McNeer was appointed to the Commission to fill the vacancy created by the death on April 28, 1960 of Mr. Joel C. Garrard; Mr. William Fort replaced Mr. Arthur Crago, whose term expired on October 16, 1960; and Dr. R. E. Parks replaced Dr. T. H. Lipscomb who resigned on October 31, 1960.

The Commission held 6 meetings and 2 hearings during the year. As a result of evidence collected at the 2 hearings, the following changes were made: the Polk County Air Pollution Control District and the Hillsborough County Air Pollution Control District were combined into a single district; the fluoride content of 35 parts per million in gladiola leaves was accepted as a standard for air pollution; and review and approval of engineering plans for air pollution control equipment by the Board was required for all new or expanding industries in the district.

Members of the Commission gave testimony at various legislative hearings held by the interim Legislative Subcommittee on Air Pollution. The Brochure Committee of the Commission prepared a 3-year progress report of commission activities for publication and distribution early in 1961.

STATEWIDE TECHNICAL ASSISTANCE AND SPECIAL STUDIES

This program is to provide technical assistance to county health

departments in handling local air pollution problems which may be beyond the technical capabilities of the county personnel. It is also the function of this program to conduct special studies when needed.

The major accomplishment of this program for 1960 was a statewide air pollution survey requested by Governor LeRoy Collins. Since only 1 engineer is assigned to the statewide program, assistance in conducting the survey was obtained from the USPHS. The survey report, to be published in March 1961, will be a joint State Board of Health—USPHS report. During the conduct of the survey, questionnaires were sent to health units, city officials, agricultural agents and industry. Visits were made to all of the 24 single county health units and 12 multi-county units. The 36 units visited have a responsibility for 52 counties, which contain 97 per cent of the state's population. City officials of 40 of the 48 cities over 10,000 population and of 11 smaller cities were interviewed. Visits were also made to 84 industrial establishments which included plants representative of all major industries in Florida. The findings of this survey are already proving helpful in planning the future of air pollution control in Florida.

The state survey showed clearly the need for a chapter of the State Sanitary Code which would permit county health department personnel to deal with minor or nuisance-type air pollution problems. In answer to this need, a chapter of the code has been drafted and is awaiting final processing. The adoption of this code chapter should bring local air pollution control much closer to reality.

Other survey recommendations include:

1. Adoption of a general enabling act permitting and fostering county and multi-county air pollution control programs.
2. Adoption of a general enabling act permitting and fostering countywide zoning of unincorporated areas.
3. Adoption of a Sanitary Code chapter requiring plan approval prior to construction of new, altered or expanded operations which might cause air pollution.
4. Amend Chapter 403, Florida Statutes, the air pollution control law, permitting a broader program and adding punitive measures.
5. Adequately staff and equip the State Board of Health to carry out its assigned duties.

The need for an air quality monitoring network in population centers was pointed out by the state survey. It is hoped that at least a portion of this project can be undertaken during 1961.

The program of technical assistance to counties was not pursued as vigorously as desirable due to the lack of personnel and the conduct of the state air pollution survey. Table 46 is a tabulation of the activities in this realm during the year.

POLK-HILLSBOROUGH COUNTY AIR POLLUTION CONTROL DISTRICT

The program was concerned with the details of the air pollution control program within the Polk-Hillsborough County Air Pollution Control District created by the Florida Air Pollution Control Commission.

The data previously gathered revealed that a definite fluorine problem exists and that all 10 phosphate companies contribute to this problem. The magnitude of the problem varies from a small per cent to a very large per cent over the maximum limit of 40 parts per million fluorine in grasses, as established by the Florida Air Pollution Control Commission regulations. The data shows a trend from the minimum concentrations in the spring, summer and fall to a maximum in the winter months. In view of this information, basic changes designed to control as many variables as possible were initiated in the overall sampling and analysis program. Included in the variables are distance from source of pollution, time of exposure, age of grass, species of grass and number of stations per area. By controlling these variables, a time concept of 1 month can be considered instead of the previous yearly concept.

Forty-seven plots of Pensacola Bahia grass were transferred from Gainesville to the Polk-Hillsborough area. This grass allowed control of the age and species of grass and provided a means to evaluate the rate of uptake and maximum concentrations of fluorine within and upon the grass.

Three new areas of possible fluorine dust pollution sources were added to the sampling network. Since information gained reveals that approximately two-thirds of the total fluorine emitted is in the dust or particulate form, it was felt these additional areas should be surveyed. The number of sampling stations varied from a minimum of 70 to a maximum of 102 with changes made to obtain the greatest effective coverage.

Since all of the companies have been in violation, more emphasis was placed upon encouraging the installation of control devices. All companies have added 1 or more major control devices and several minor ones in 1960. Expansion programs of most of the companies include control devices on existing equipment and facilities that will reduce the overall emission even though the total output of product will increase.

In June the Air Pollution Control Commission adopted rules and regulations covering gladioli as grown in south Hillsborough County. A weekly sampling program was started in the gladioli fields the first week of October. Since that time, 3 fumigations have been unofficially reported. Violations of the gladioli regulations exist almost from the time the plants barely show themselves out of the ground. More detailed study in this area is necessary and direct air sampling will be essential during the next growing season to obtain definite information.

Reports on air pollution activities are provided to the Commission on a quarterly basis and are available to all interested parties upon request. These reports present analytical data and information as to inplant controls and improvement progress.

Although regulations covering plan and specification review for the Polk-Hillsborough Air Pollution Control District were formally adopted by the Commission late in the year, this function had been carried on for several months. This is a new phase in air pollution control work and will entail a review of plans for any and all sources of possible air pollution within the district.

Future program emphasis will be for greater familiarization with the individual plants, their operations and sources of possible air pollution. It will also be necessary to expand direct air sampling activities to give a clear and concise picture of the air pollution problem within the district.

TABLE 46

SUMMARY OF STATEWIDE COMPLAINT INVESTIGATIONS

I. Complaint Status

Investigations	32	(in 14 counties)
Solutions	8	
Pending	11	
Solutions not technically or legally possible at this time	6	
Complaints with little or no basis	7	

II. Complaints by industry and/or operation

Trash and garbage dumps	2
Power plants	2
Sewage treatment plants	2
Asphalt roofing & shingle manufacture	1
Concrete batching plant	2
Naval stores solvent extraction plant	1
Terpene products plant	1
Small incinerators	1
Oil reclaiming plant	1
Wood waste disposal	3
Kerosene heater	1
Limerock drying	2
Open burning	1
Asphalt paving plant	3
Dry cleaning plant	1
Small boilers (laundries, hospitals, etc.)	4
Sandblasting	1
Pollen fallout	1
Fertilizer plant	1
Natural gas leakage	1
Unknown sources	1

III. Complaints by Counties

Broward	4
Dade	1
DeSoto	1

Duval	6
Lake	1
Marion	2
Orange	3
Osceola	1
Palm Beach	5
Pinellas	2
Sarasota	1
St. Lucie	1
Seminole	2
Volusia	2

AIR POLLUTION SAMPLES AND ANALYSES

Samples analyzed		2839
Total F Distillations		3681
Type Samples Analyzed:		
Natural grass	1190	
Standard bahia	349	
Static filter paper samples	1084	
Gladiola leaves	91	
Soils	55	
Citrus leaves	8	
Water	40	
Bone	1	
Special	8	
Spray and fertilizer	12	
Other	1	
	2839	

DIVISION OF WASTE WATER

RALPH H. BAKER, JR., M.S.S.E.
Director

The year under review was the second full year of operation of this division. The present staff level of the division consists of 4 engineers, 3 stenographers and a director. One engineer is currently doing post-graduate study. Another engineer is assigned as assistant engineer in the Northeast Regional Engineer's office. Work in the field is conducted on a cooperative basis with regional and county sanitary engineers.

The work of the division falls into 2 major categories: municipal waste and industrial waste. The control of drainage wells is a separate problem related to both of these.

MUNICIPAL WASTES

A decrease in total projects submitted from the previous year was noted in 1960. This marked the first time in several years that there was a decrease. In many respects it was gratifying since an increased number would have been exceedingly difficult to satisfactorily process.

During the year, some 733 out of 777 projects submitted for municipalities, subdivisions and commercial areas were approved. This indicates a decrease of 20 per cent in those submitted and an 18 per cent decrease in approvals (Table 48). It is felt that some of the decrease was brought

about by the increased implementation by regional and county sanitary engineers of the cooperative plan outlined by memorandum dated April 27, 1959 and entitled, "Procedures for Processing Sewage Treatment Facilities Involving Septic Tanks." A compilation of listed information copies of projects processed locally reveals that some 335 projects were handled in this fashion. This number is in excess of the prior year and in combination with approvals by this division shows a net decrease in approvals of only 74 projects, or less than 7 per cent (Table 50).

In many respects it is surprising that the project workload continued at such a heavy pace, in view of the pronounced recession in the home construction industry as reported from field personnel and consulting engineers.

Preliminary planning for proposed work increased during the year, as evidenced by the number of preliminary reports received and reviewed. Some 64 reports were submitted by consulting engineers for review in determining adequacy of the design and satisfaction of criteria of this office. In addition, numerous consultations were held with consulting engineers, developers and county health department and regional engineers with reference to expansion of collection and treatment systems and proposed new facilities. This preliminary work, though demanding considerable time, plays an essential part in project approval.

As in past years, operational supervision of existing sewage treatment works has been, for all practical purposes, nonexistent. No program of regular visitation and observation was instigated as personnel were not available for this purpose. However, several visits of an emergency or critical nature were made. This aspect of the program is undoubtedly the weakest link in performing the function of preserving and protecting the natural waterways of the state. A critical need exists now, and will continue to exist, until adequate personnel are made available and a regular program instituted.

Late in the year a request was received from the Committee on Sewage and Waste Disposal of the Conference of State Sanitary Engineers for a list of the current municipal waste treatment needs in the state. In reviewing the information secured, there was emphasis on the amount of work yet to be done in the state to provide adequate and proper waste treatment facilities. Sewage treatment works to serve 2 million people in incorporated and unincorporated urban areas are presently needed. As expected, the need was particularly obvious in the most densely populated counties, including Dade, Broward, Duval, Escambia, Orange and Pinellas. It is also interesting to note that, in terms of numbers of facilities, the greatest need exists in the small communities of less than 2000 persons, whereas only 9 municipalities of over 25,000 persons need facilities to serve present built-up areas. In order to properly cope with the expected growth and yet continue in efforts to decrease this backlog of areas in need of proper facilities, additional staff personnel will be necessary and a vigorous program of education continued (Table 49).

The financial aid provided through Public Law 660 was a continuing impetus to the construction of sewage treatment facilities for municipalities. The following data indicate the assistance provided from this source:

FISCAL YEAR 1960-1961	
Federal allotment for fiscal year 1960-1961	$ 900,350.00
Funds released by cities from unused contingency funds	$ 60,000.00
Unencumbered funds from allotments for previous fiscal years	$ 179,904.75
Total amount available to applicants qualifying for a grant for the current fiscal year	$ 1,140,254.75
Number of applications received	24
(Of these 12 were new applicants and 12 were letters from unsuccessful applicants of previous fiscal years requesting reconsideration of original applications or new projects.)	
Estimated costs of overall projects	$13,806,289.66
Federal grants requested	$ 3,144,415.76
Per cent of overall costs for which grants were requested	22.7

Offers of assistance provided from this source were made by the USPHS to Lynn Haven, Jacksonville, South Daytona, Macclenny, Cocoa, Gainesville, Winter Garden, Pensacola, Riviera Beach and Plant City. Bonifay had accepted but later released their funds and will qualify again with Sebring, Hallendale, Melbourne and Indian Rocks Beach for a grant when sufficient funds are available. Favorable consideration is based on readiness to proceed with construction and other specified priority factors.

INDUSTRIAL WASTES

During 1960, plans were approved for 88 industrial waste treatment facilities in 21 counties. The estimated cost of construction was $831,799 (Table 51). A comparison indicates that the total estimated value of projects approved increased about 23 per cent, although the number of projects decreased sharply.

It was noted that more than one-third of the total value of projects approved was due to 1 project. This was the project for a primary clarifier and associated equipment for Hudson Pulp & Paper Corporation, Palatka. This may be considered a partial fulfillment of efforts expended during the last several years. It is expected this treatment facility will remove large quantities of wood fiber and like materials formerly deposited in Rice Creek. This in turn exerted some influence on the St. Johns River.

Seventy-seven of the 88 projects approved during the year were facilities to treat laundry waste waters. After May 1, no new laundry waste treatment plans were approved in Dade County and the same was true in Broward County after June 1, 1960. This action was taken because of the surfactant (detergent) problem. The geology of a large portion of these 2 counties is such that materials placed in or on the surface of the ground may travel for considerable distances virtually unchanged. The greatest portion of materials used as detergents today is such that it is little affected by normal destruction processes. Whereas

normal bacterial action soon resulted in the destruction of soap, this is not true of surfactants. If sufficient quantities of these substances are permitted to enter the underground waters, they may be withdrawn at varying distances by a water supply. Surfactants are becoming more and more of a problem to the sanitary engineering and other professions.

Other approvals included food processing and plating wastes plants.

Current operating reports are received regularly from 10 large industrial plants. Reports continue to be received from 1 plant located in a county exempt from the control of the State Board of Health.

STREAM POLLUTION

Activities in this program included the monitoring and surveillance of waterways, completion of special studies and investigation of wastes and the receiving waters to which these wastes discharge. For certain of these studies and investigations, formal reports have been prepared and distributed, while for others the collected information has been placed in the files for future reference.

A special survey of the canals and waterways in Palm Beach, Broward and northern section of Dade County was commenced in 1959. A major objective of this survey was to determine existing chemical and biological conditions as a basis for establishing limitations for future waste loading of the waterways. Additional surveys as well as resurveys in this area were carried out by personnel of the Winter Haven regional environmental program. Following receipt of the information thus collected, a formal report was prepared and has been distributed.

Personnel of the Winter Haven program undertook a survey in the City of Okeechobee designed to determine the effect on the municipal sewage treatment plant of an industrial load imposed by a canning plant located in that community. Similarly, surveys by the Winter Haven group were undertaken with respect to a waste disposal system at Snively's Grove and at several other citrus canning plants relative to the condition of the waters to which their wastes were discharged. They also carried out a chemical and biological survey on the Florida East Coast Canal in Dade County. A report on this survey was completed and furnished to the Dade County Department of Public Health at whose request the survey had been undertaken.

For the first time since 1953, monitoring and surveillance of the waters of the Peace and Alafia Rivers was placed on a continuing basis and information was brought up-to-date. Winter Haven personnel also made investigations of 8 major fish kills in lakes and rivers in the southern portion of the state, and following 1 such occurrence, a fish population study was undertaken.

One of the major activities of the environmental program in Winter Haven has been concerned with waste disposal processes and facilities of the phosphate industry in Polk County. Two separate phosphate company dam breaks resulting in large amounts of slime being discharged

into the Peace River in January required considerable effort and study. As a consequence, Governor LeRoy Collins appointed a committee for the study of dike construction by the phosphate companies. Aid was given this committee in pointing out some of the strong and weak points of existing dikes and arranging for and participating in a meeting between the committee and the 8 phosphate companies involved in mine operation and dike construction.

Personnel of the Pensacola regional environmental program commenced the continuous monitoring and surveillance of waterways in the west Florida area. This staff likewise made investigation into reports of fish kills or improper discharge of industrial wastes. As a part of this program, contacts were made with the many industries in the area so that reduction or elimination of pollutional loads would be obtained. Personnel of the Jacksonville staff together with those from Pensacola undertook the first phase of a resurvey of the waters of the Apalachicola River preliminary to the establishment of a new paper mill upstream in Georgia.

In conjunction with activities in the industrial waste program designed to eliminate or reduce waste discharges in Duval County, informational surveys and studies were undertaken by the stream pollution staff of the environmental laboratory in Jacksonville.

One of the activities of the stream pollution personnel at Winter Haven, Pensacola and Jacksonville involved the instruction of operators of sewage treatment plants in laboratory analysis procedures. The above personnel likewise assisted in short schools and at various gatherings of sewage treatment plant personnel whenever called upon. One phase of this activity, which should receive greater attention in the future, involved the conduct of surveys on the operation and efficiency of numerous sewage treatment plants.

DRAINAGE WELLS

During 1960, 297 drainage well permits were issued. Table 52 shows that 71 were for lake level control or surface waters, 136 were to accept waste water from air conditioning systems, 73 for swimming pool drainage and 17 for other purposes. The total represents a slight increase over the total for the previous year, but is still substantially less than for preceding years.

As in the past, the largest number were issued in Dade County, mainly for air-conditioning and swimming pool waste waters. A change was made shortly after the first of the year whereby the Dade County Department of Public Health issued permits for closed system air-conditioning. This resulted in more rapid action.

Forty permits were issued in Orange County during the year, all for lake level control. This increase resulted mainly from the very heavy rainfall experienced by this section of the state. Many of the lakes in the vicinity of Orlando were unable to handle the greater runoff, resulting in flooding of adjacent properties. Considerable effort was exerted to cooperate with the county health department and county authorities to process applications faster.

The State Geologist cooperated fully with this agency to attempt to provide better wells which would more fully protect water supply wells. Test wells were utilized for the same purpose. In at least 1 instance a well was drilled as a test well and then permitted as a drainage well, rather than drilling a larger well. It was found that in some cases wells flowed as artesian wells, rather than accepting water, pointing up the fallacy of relying on such installations to take care of the drainage problems of an area.

Further engineering studies have been carried out, and some money has become available to permit the start of the overland drainage program of Orange County which has been envisioned by the State Board of Health for 12 years.

EDUCATION

Members of the staff cooperated with the Division of Water Supply and others in the provision of instruction given at 5 district short courses and 1 annual short course for water and sewage plant operators (Table 57. See Report of Division of Water Supply).

Planning has been started on an industrial wastes workshop to be conducted over a 3-day period, probably in June.

One engineer was assigned to industrial waste work and another was assigned for 7 months of the year.

A composite film was prepared by the various industries again for the second year and was shown at the annual Florida Pollution Control Association meeting at Ft. Lauderdale. This film depicted in a clear manner the different types of waste treatment utilized by Florida industry.

DIVISION OF WATER SUPPLY

JOHN B. MILLER, B.S., M.P.H.
Director

GENERAL

Loss of experienced personnel through transfer and resignation continued to handicap the division; also, lack of sufficient office workers to handle clerical and stenographic details, as well as the need of more professionals for relief of imbalance of program, are acute problems continuing during the year. Although the statistics tabulated in following pages indicate a large volume of work, the unsatisfactory working conditions prevalent in present rented quarters has not been conducive to

the best efforts being made. Such circumstances continue a deterrent to efficiency and effectiveness.

Confirming that the activity during the year has continued out-of-balance, consisting in a larger measure of the paper phase of sanitary control of the environmental water contact, attention is directed to the total of 936 water supply and public swimming pool projects for which the engineering plans and related documents were processed. This includes 20 per cent of the pool plans approved in several county health departments which were checked. Numerically, this total is virtually equal to (1.3 per cent less) the all-time high of the previous year. Processing of these engineering plans and papers for water facilities and swimming pools entailed many hundreds of telephone calls, letters and conferences. The projects include those which were approved virtually as submitted; those wherein certain features had to be reconciled with the designing engineers; and those projects which were finally approved after revisions.

As a result of the above circumstances, sanitary control of existing water works was carried out by the division in a limited fashion. Some consultation was given to county health departments and water plant personnel. (The Table listing the counties and their respective numbers of public water systems, and which also shows the relatively few visits to a small fraction of these systems, emphasizes the need to relieve this unsatisfactory situation.)

There is reason to believe significant improvement will be made in the ensuing year, with regard to better control of ground water sources. Since over 90 per cent of the number of public supplies in Florida utilize wells as sources of supply, the division has participated with drilling industry representatives and professional personnel of other interested agencies in conferences to devise better statutory and regulatory approaches. These include a proposed law for licensing well drilling contractors which is expected to be enacted in the 1961 legislative session. It is expected a statewide code on virtually all water supply well construction may be adopted in one of the other agencies. This would help control drilling which in the past has adversely affected ground water resources otherwise usable for public supply sources.

In the water recreation field some work was done during the year on the bacteriological and hydraulic aspects of the smaller public swimming pool. This had to do with the relative effectiveness of the so-called surface skimmer in comparison with the peripheral overflow gutter. Float tests and laboratory work (by the Bureau of Laboratories) gave results which were not entirely conclusive; but they did give reason to show preference to the continuous gutter around the pool. This field study was performed in cooperation also with the Broward County Health Department and the Florida Swimming Pool Industries Association.

WATER FACILITIES CONSTRUCTION

In Table 54 may be seen some statistical data having to do with

planning for construction of public water facilities during the year. The work is statewide generally and in the 46 counties as shown specifically. The data are representative of the number of engineering plans and specifications approved; and they show the consulting engineers' estimated costs, together with plant capability increase in terms of millions of gallons per day rating. Although the number of projects approved was slightly less than in the previous year, (5 per cent) the dollar volume per the engineers' estimates totaled appreciably more, 12 per cent, than in 1959.

As also seen in Table 54, the construction proposed as represented by the approved plans was mostly (69 per cent) for water distribution systems and extensions. It is noteworthy to mention that the remaining (31 per cent) estimated construction costs pertain to supply or new plants and additions. When these are completed they will comprise an estimated total 112.67 million-gallons-daily capability, added to the affected systems in the state, for meeting public demands for water.

Although not shown in the tabulated data, most of the projects for which plans were approved (57 per cent) were for facilities in areas not served by city, county or district supplies. This continues in the rather definite pattern of realty subdivision development prevailing in Florida during the past decade where privately owned firms develop the utilities. The remainder were, of course, practically all for water supply projects undertaken by municipalities or municipally franchised utilities firms, and a county system.

A look at Table 54 gives a clear picture of the continuing trend of public water supply phase of environment control.

PUBLIC SUPPLY WELLS

By far the greater number of public water supplies in the state utilize ground water resources, and further development of this is shown in Table 55 wherein is listed data on well construction permits issued during the year. The total number of such permits was somewhat less (13 per cent) than the number issued in the previous year. On the other hand, the processing of water supplies for the many subdivisions mentioned before, together with new municipal wells, resulted in a continued large volume of this activity, it being nearly 15 per cent greater than the annual average number of public supply well permits issued in the previous 5 years.

Table 55 also shows geographical distribution of well permits to have been generally over the state (in some 43 counties), although considerably over half (64 per cent), the total number were issued for wells in about 16 per cent of the total number of counties. Among those counties showing more well construction activity were Hillsborough, Sarasota, Pasco, Volusia and Lake.

OPERATION OF WATER WORKS

Reference to Table 56 will show the number of existing public water systems (each serving an estimated 100 persons or more, according to inventory made in 1959) in the several counties, or total of 779 such systems. The supervision of these water facilities dispensing water to the public, from a sanitary standpoint, continued to be rather neglected as a whole during the year. In the columns of data in the table appear the numbers of plans and the numbers of visits to water plants by central office personnel. Only a little over 17 per cent of the total number were visited in connection with sanitary supervision of these plants. As also seen in this table, except for special inventory work in Orange County, most visits were made to water plants (53 per cent) in counties not having sanitary engineering personnel in their health departments; and this was also the case in terms of percentage (54 per cent) of total number of such visits made. It should be stated that some of those 10 counties have engineers who maintain programs looking to sanitary control of water plant operation, and the water supply division personnel cooperated with the local engineers as to new plants going into service, and on special problems. The regional engineers of the bureau also have made some visits to water systems in their respective areas.

An important adjunct to water utilities maintenance and operation improvement is the inservice training program for operators in which the division was again active during the year. Progress in this direction is shown in a measure by the data on water works operator certification seen in Table 57. Of the total number of applicants admitted to the examinations, about 53 per cent were successful in attaining certification in the several "Classes" of water works operator. This indicates good degree of home-study preparation; but also shows need for still further effort in that direction which the short course is considered to stimulate.

WATER FLUORIDATION

No additional cities in Florida reported commencing fluoridation of their water supplies during the year. One city submitted plans and specifications for the installation, but it was still delayed at year's end because of possible court action. At one of the cities (Ocala) practicing fluoridation a referendum was reported wherein the vote was more than 2 to 1 for continuing the practice. Other cities continuing water fluoridation during the year were Belle Glade, Clewiston, Cocoa, Gainesville, Miami (including other towns and cities served), Naples and Orlando.

PUBLIC SWIMMING POOLS

Construction costs estimated by consulting engineers submitting the plans and specifications for approval of pools to be built for public use continued on the average of $14,300 for the relatively small pool. This pool activity constitutes a tourism factor or indicator, in that the greater number of plans approved continue to be for motels, apartments, hotels,

etc. The statistical data are seen in Table 55. A somewhat larger (11.9 per cent) number of plans were approved than in the previous year, with an accompanying increase (15.9 per cent) in total estimated cost of the pool construction.

Although the percentage of total number of pool plans approved was a little less (3.6 per cent) during the year in such counties, the local handling of the 118 pool projects approved in county health departments having their own engineers continued to be helpful. Of those, a one-fifth random check of the plans was done in the division office.

Since each pool has its water filtration, chemical treatment and recirculation facilities, the sanitary control of operation continues in amassed volume. Aggravating this situation is the lack of trained operators at the many hundreds of smaller pools constituting the aforementioned "tourist attractions". The data in Table 55 show by number of operation permits issued, the 14.2 per cent increment to this problem in water contact environment control.

The division gave some help in consultative services to county health departments in the pool operation situation; and assisted with conducting inservice training programs in Escambia, Bay and Leon Counties where a total of 65 pool owners and their employes were in attendance.

NATURAL BATHING PLACES

No new permits were issued for these bathing places; and the distribution of permits continued valid with respect to location as seen in Table 55.

COMMON CARRIER WATER SUPPLY SANITATION

Continuing a cooperative agreement with the U. S. Public Health Service, and on the basis of Service Quarantine Regulations and Drinking Water Standards, the program for sanitary control of water supplies providing potable and culinary water used by common carriers was retained during the year 1960. This program related to establishing and maintaining an adequate bacteriological sampling schedule, review of the analysis results together with appropriate action to insure the safety of the water supply. It also involves up-dating chemical and physical data as required.

Supervision of the sanitary aspects of the methods and facilities for placing water aboard airplanes, railway trains and vessels operating in interstate traffic is a function of the Division of Sanitation, and is reported by that office.

The field work involved was accomplished by health department personnel principally at regional and local levels. The results of these field activities were reported to the central office which utilized the submitted data to coordinate subsequent field operations. These reports also

served as the basis of the recommendations of the department to the Public Health Service Regional Office in Atlanta, relative to the approval or disapproval of each individual supply.

A total of 30 water supplies serve 8 airline catering points, 17 railroad and 13 vessel watering points. Inspection of each supply was necessary to determine compliance with acceptable criteria and the findings of these inspections were forwarded to the USPHS on the prescribed report form. Frequently additional field visits to the supplies were necessary due to this agency's recommendation that the facilities be given provisional approval for a limited period of time. In several instances additional data or request for clarification of submitted data were necessary in order to provide sufficient, accurate information on which to base this division's recommendations.

During the year 2 additional supplies were added to the list, both serving airline water points. Difficulties in proper completion of the report forms in these cases, as in others noted above, resulted in fewer reports than is desirable to the USPHS during the period; however, these deficiencies are being rectified and the program should be in line early in 1961.

TABLE 47

ENGINEERING LABORATORIES ANALYSES—1960 BASIC WATER QUALITY DATA

LABORATORY	D.O.	B.O.D.	pH	Solids	Fluorides	C.O.D.	Chlorides	NO_2-NO_3-NH_3	Radiologicals	Phosphates	Biological	Miscellaneous*
Jacksonville	270	259	223	872	43	73	15	2	600	35	9,625	528
Winter Haven	433	681	686	948	418	.....	296	1,020	.....	200	8,624	1,697
Orlando	.....	11	2	30	.....	2	35	2	.....	.....	.....	60
Pensacola**	632	608	424	132	.....	121	314	114	.....	28	15,560	913
Totals	1,335	1,559	1,325	1,982	461	196	660	1,138	600	263	33,809	3,198

*Miscellaneous includes Phenols, Cyanides, Surfactants and other specialized analyses.
**A portion of these analyses were carried out in mobile laboratory.

TABLE 48

SUMMARY OF PUBLIC SEWERAGE PROJECTS APPROVED IN 1960

COUNTY	No. of Projects	Design Population	ESTIMATED COSTS			
			Sewers	Lift Station	Plant	Total
Alachua	7	17,815	404,999	106,511	17,280	528,790
Baker	3	3,700	107,526	34,000	123,076	264,602
Bay	8	3,236	392,950	58,050	172,000	623,000
Brevard	44	57,314	1,126,032	394,882	830,926	2,351,840
Broward	40	53,527	3,351,068	527,250	534,700	4,413,018
Charlotte	15	9,121	859,500	70,000	125,000	1,054,500
Clay	4	525	44,200	10,000	.....	54,200
Collier	2	170	8,900	12,500	6,600	28,000
Columbia	2	8,300	.....	.....	56,430	56,430
Dade	71	67,191	4,085,467	491,775	1,202,450	5,779,692
Dixie	2	144	5,000	.....	9,000	14,000
Duval	130	47,613	1,442,311	201,800	1,344,400	2,988,511
Escambia	18	15,301	382,787	74,500	437,400	894,687
Franklin	2	1,563	123,000	20,000	1,000	144,000
Gulf	1	.....	.....	.....	.....	.....
Hernando	6	2,820	158,051	7,500	52,400	217,951
Highlands	1	.....	1,000	.....	4,000	5,000
Hillsborough	31	32,330	1,033,921	109,058	253,880	1,396,859
Indian River	7	423	25,000	6,000	7,500	38,500
Jackson	1	.....	.....	.....	.....	.....
Lake	1	.....	6,525	2,500	7,500	16,525
Lee	17	16,118	510,815	116,200	309,300	936,315
Madison	1	180	12,750	10,750	.....	23,500
Manatee	22	44,195	1,141,948	65,650	819,193	2,026,791
Marion	2	1,442	40,429	26,000	.....	66,429
Martin	6	772	47,850	16,500	5,000	69,350
Monroe	2	70	1,000	.....	2,000	3,000
Nassau	2	.....	.....	.....	.....	.....
Okaloosa	6	2,321	75,108	10,500	90,000	175,608
Okeechobee	1	252	14,537	6,622	.....	21,159
Orange	40	118,752	645,896	113,851	1,329,832	2,089,579
Osceola	1	511	36,000	6,000	.....	42,000
Palm Beach	32	63,563	2,343,142	327,753	752,875	3,423,770
Pasco	7	2,134	218,691	5,025	54,480	278,196
Pinellas	111	100,745	6,775,367	752,598	1,329,100	8,857,065
Polk	8	63,393	837,841	72,890	50,000	960,731
Putnam	2	170	9,400	5,100	7,000	21,500
St. Johns	1	.....	.....	7,000	8,500	15,500
St. Lucie	6	2,577	188,850	46,500	65,000	300,350
Santa Rosa	5	1,769	61,700	21,800	75,000	158,500
Sarasota	33	21,362	1,260,900	311,066	327,800	1,899,766
Seminole	9	4,451	207,140	60,500	66,600	334,240
Sumter	1	.....	34,291	.....	.....	34,291
Suwannee	1	140	9,000	6,000	.....	15,000
Volusia	19	12,239	1,060,960	289,200	228,300	1,578,460
Walton	1	179	8,730	.....	.....	8,730
Washington	1	.....	9,750	.....	.....	9,750
TOTALS	733	.....	29,110,332	4,403,831	10,705,522	44,219,685

TABLE 49

WASTE TREATMENT NEEDS

Incorporated Municipalities by Population Classification

Population Category	Number of Municipalities	Population
(1) 500— 999	54	38,293
(2) 1,000— 1,499	29	35,011
(3) 1,500— 1,999	21	37,044
(4) 2,000— 2,999	21	52,224
(5) 3,000— 4,999	19	72,637
(6) 5,000— 9,999	23	168,812
(7) 10,000—24,999	14	185,532
(8) 25,000 & Over	9	829,191
Total	190	1,418,744

Unincorporated Unsewered Urban Areas by County

Alachua	8,000	Lee	5,000
Bay	2,000	Leon	6,000
Brevard	6,000	Manatee	15,000
Broward	92,000	Marion	2,000
Charlotte	5,000	Nassau	1,500
Clay	2,500	Orange	43,000
Collier	3,000	Palm Beach	22,000
Columbia	2,000	Pinellas	40,000
Dade	125,000	Polk	20,000
Duval	90,000	St. Lucie	2,000
Escambia	45,000	Sarasota	12,000
Hendry	1,500	Seminole	2,000
Hillsborough	15,000	Volusia	8,000
Indian River	2,000		
		Total	577,500

TABLE 50

WASTE PROJECTS PROCESSED LOCALLY, 1960

REGIONS	
West	0
Northwest	25
Northeast	159
Central	31
Southwest	2
Southeast	3
COUNTIES	
Brevard	0
Broward	9
Dade	21
Hillsborough	2
Orange	0
Palm Beach	3
Pinellas	66
Polk	5
Sarasota	4
Volusia	5
Total	335

TABLE 51

INDUSTRIAL WASTE PROJECTS APPROVED IN 1960

COUNTY	No. of Projects	BOD Pop. Equiv.	Estimated Cost
Bay	1	129	$ 4,500
Brevard	2	264	10,000
Broward	16	2,121	73,600
Charlotte	2	371	10,000
Collier	1	166	3,500
Dade	18	2,754	101,319
Duval	5	450	19,550
Escambia	8	667	21,600
Hillsborough	3	6,939	47,700
Manatee	3	985	18,500
Martin	1	124	4,000
Okaloosa	4	520	13,500
Orange	2	276	8,500
Palm Beach	5	866	20,000
Pasco	1	180	4,620
Pinellas	2	291	7,500
Polk	1	171	22,100
Putnam	2	154,000	307,310
Sarasota	1	.....	80,000
Seminole	5	347	20,500
Volusia	5	729	33,500
TOTAL FOR STATE	88	172,350	$831,799

TABLE 52

SUMMARY OF DRAINAGE WELL PERMITS ISSUED IN 1960

COUNTY	Lake Level or Surface	Air Conditioning	Swimming Pools	Other	Total
Brevard	.....	.....	.....	1	1
Broward	7	1	.....	8	16
Citrus	1	.....	.....	.....	1
Dade	10	126	73	7	216
Hillsborough	1	2	.....	.....	3
Jefferson	1	.....	.....	.....	1
Leon	2	1	.....	.....	3
Marion	7	1	.....	1	9
Orange	40	.....	.....	.....	40
Polk	.....	1	.....	.....	1
Sarasota	.....	1	.....	.....	1
Seminole	2	.....	.....	.....	2
Volusia	.....	3	.....	.....	3
STATE	71	136	73	17	297

TABLE 53

SANITATION OF WATER SUPPLIES USED BY COMMON CARRIER

COUNTY	No. of Supplies	Type Carrier Supplied			Ownership(1) of Supply		Reports Recommended				
		Air	Rail	Vessel	M	P	Approval	Provisional Approval	Prohibited	Deletion	No Current Report
Bay	2			X	1	1	1				1
Brevard	1			X	1		1				
Broward	1	X		X	1		1				
Collier	1		X		1		1				
Dade	1	X	X	X	1		1				
DeSoto	1		X	X	1		1				
Duval	3	X	X	X	3		2		1		
Escambia	1	X	X	X	1		1				
Gadsden	1		X		1		1			1*	
Gulf	1			X		1	1				
Hillsborough	3	X	X	X	1	2	3				
Lee	1		X		1			1			
Leon	1	X	X		1		1				
Monroe	1			X	U.S. Navy		1				
Nassau	1			X		1	1				
Palm Beach	2	X	X	X	1	1	1			1**	
Pasco	1		X			1					1
Pinellas	1	X	X		1		1				
Polk	1		X		1		1				
St. Lucie	1			X	1			1			
Sarasota	1		X		1		1				
Seminole	1		X		1		1				
Sumter	1		X		1		1				
Volusia	1		X		1				1		
TOTALS	30				23	7	23	2	2	2	2

(1) Ownership of Supply M—Municipal or Government P—Private
*Approved early in 1960, deleted later.
**Deleted early in 1960, later returned to approved list.

TABLE 54

SUMMARY OF WATER SUPPLY PROJECTS APPROVED—1960

COUNTY	No. of Projects	Capacity Increase MGD	ESTIMATED COSTS		
			Water Supply	Distribution	Total
Alachua	4	.35	$ 14,000.00	$ 22,000.00	$ 36,000.00
Baker	2	.72	20,000.00	298,000.00	318,000.00
Bay	2	.96	50,300.00	619,800.00	670,100.00
Brevard	40	1.50	100,000.00	1,254,198.00	1,354,198.00
Broward	74	15.08	1,246,000.00	3,156,356.60	4,402,356.60
Calhoun	1			7,000.00	7,000.00
Charlotte	8	0.68	145,456.00	272,760.00	418,216.00
Clay	4	0.20	6,000.00	26,900.00	32,900.00
Collier	3			90,500.00	90,500.00
Dade	96	7.22	770,600.00	3,871,537.00	4,642,137.00
DeSoto	1				(No Cost)
Dixie	1	1.10	68,000.00	45,000.00	113,000.00
Duval	67	10.49	426,253.00	676,778.00	1,103,031.00
Escambia	7	4.40	150,885.00	487,684.00	638,569.00
Franklin	3			126,000.00	126,000.00
Gilchrist	1			5,000.00	5,000.00
Hamilton	2	0.23	20,000.00	6,000.00	26,000.00
Hendry	1	.36	122,000.00	103,000.00	225,000.00
Hernando	3	1.07	20,000.00	88,075.00	108,075.00
Highlands	4	.32	80,000.00	87,748.00	167,748.00
Hillsborough	25	18.70	2,465,000.00	560,045.00	3,025,045.00
Indian River	8	.14	100,000.00	65,800.00	165,800.00
Jackson	1			25,000.00	25,000.00
Lake	14	4.49	304,300.00	78,200.00	382,500.00
Lee	16	.85	478,500.00	621,228.00	1,099,728.00
Leon	4	.29	3,680.00	69,575.00	73,255.00
Manatee	25	1.03	106,200.00	240,423.00	346,623.00
Marion	2			4,100.00	4,100.00
Martin	5	1.30	230,000.00	152,155.00	382,155.00
Nassau	1			5,800.00	5,800.00
Okaloosa	5	.22	20,000.00	28,740.00	48,740.00
Okeechobee	2			71,973.00	71,973.00
Orange	41	3.43	209,718.00	546,984.00	756,702.00
Osceola	3	.72	30,000.00	58,850.00	88,850.00
Palm Beach	45	14.72	1,479,500.00	1,773,837.00	3,253,337.00
Pasco	8	1.73	54,350.55	238,874.00	293,224.55
Pinellas	110	10.56	198,900.00	1,983,916.10	2,182,816.10
Polk	6	4.95	117,000.00	55,500.00	172,500.00
Putnam	1			15,000.00	15,000.00
St. Lucie	8	.36	110,700.00	70,326.00	181,026.00
Santa Rosa	2	.36	28,000.00	26,800.00	54,800.00
Sarasota	33	1.81	244,100.00	2,244,300.00	2,488,400.00
Seminole	12	.26	17,000.00	294,020.00	311,020.00
Volusia	26	2.07	106,000.00	546,983.00	652,983.00
Walton	1			11,000.00	11,000.00
Washington	1			11,900.00	11,900.00
TOTALS	729	112.67	$9,542,442.55	$21,045,665.70	$30,588,108.25

TABLE 55

PERMITS ISSUED FOR SWIMMING POOLS, NATURAL BATHING PLACES, WATER WELLS; PLANS APPROVED FOR PROPOSED PUBLIC SWIMMING POOLS, BY COUNTIES 1960

COUNTY	PERMITS ISSUED				Plans approved for Proposed Public Swimming Pools	
	Swimming Pools**	Natural Bathing Places**	Water Supply Wells	Swimming Pools	Number	Estimated Cost
STATE	1,981	53	250	247	301	$4,324,080.00
Alachua	10	2	6	2	3	81,500.00
Baker			1			
Bay	18	1		9	7	77,000.00
Bradford	4		2			
Brevard	14		5	4	6	125,500.00
Broward	490	2	6	69	53*	480,492.00
Calhoun						
Charlotte	2				1	12,000.00
Citrus	11		1		2	28,000.00
Clay	11	8	2		1	7,500.00
Collier	4		1	1	6	74,150.00
Columbia	5		2		1	10,000.00
Dade	617	2	6	42	52*	1,001,426.00
DeSoto			1			
Dixie			1			
Duval	43		11	10	6	70,500.00
Escambia	10	1	4	4	9	130,500.00
Flagler			1			
Franklin		1			1	10,000.00
Gadsden	1		1		1	60,000.00
Gilchrist						
Glades						
Gulf			2			
Hamilton		1	1			
Hardee						
Hendry	2					
Hernando			4			
Highlands	1	1	1		1	12,000.00
Hillsborough	9	7	31	1	5*	93,500.00
Holmes						
Indian River	11			1	2	16,500.00
Jackson	3		3	1	1	9,000.00
Jefferson						
Lafayette						
Lake	13	1	13	2	5	69,000.00
Lee	20		1	1	5	180,200.00
Leon	12	3	6	2	4	92,300.00
Levy	2					
Liberty		2				
Madison	2		2			
Manatee	1	2	10	1	7	83,500.00
Marion	33	3	5	5	3	34,000.00
Martin	6		1	2		
Monroe	31			7	7	74,000.00
Nassau	10			4	4	40,000.00
Okaloosa	3		4	2	5	61,150.00
Okeechobee	1					
Orange	27	1	11	3	7	66,800.00
Osceola	1		1			
Palm Beach	167	1	11	23	25	416,800.00
Pasco	1		16		1	9,915.00
Pinellas	157	3	11	16	28	265,837.00
Polk	36	3	10	10	8*	97,600.00
Putnam	3		9		3	21,000.00
St. Johns	19			1	3	41,310.00
St. Lucie	13		2		2	76,000.00
Santa Rosa	1					
Sarasota	48	2	21	12	8	159,500.00
Seminole	6	4	5		1	22,600.00
Sumter						
Suwannee	2					
Taylor	4		1	2	3	31,000.00
Union						
Volusia	91		16	10	14	182,000.00
Wakulla	1	1				
Walton	2		1			
Washington	2	1				

*Local County Approvals
**Accumulative or Continuous

TABLE 56

SUMMARY OF WATER PLANT OPERATION VISITS*

COUNTY	No. of Plants Visited	No. of Visits	Existing No. Plants (As of 1959)
STATE	136	175	779
Alachua	1	2	10
Baker			2
Bay	12	12	13
Bradford			2
Brevard**	8	7	12
Broward**	5	7	34
Calhoun			1
Charlotte			3
Citrus			3
Clay			8
Collier	1	2	6
Columbia			1
Dade**	11	17	48
DeSoto	1	2	3
Dixie	1	1	2
Duval	1	1	89
Escambia			15
Flagler			2
Franklin	1	1	6
Gadsden	2	4	5
Gilchrist			1
Glades			2
Gulf	2	4	4
Hamilton			3
Hardee			4
Hendry	1	4	2
Hernando			3
Highlands	1	1	9
Hillsborough**	3	3	23
Holmes			1
Indian River	1	2	7
Jackson	1	1	12
Jefferson			3
Lafayette	1	2	1
Lake			13
Lee	3	5	7
Leon			32
Levy			5
Liberty			1
Madison			4
Manatee	1	2	28
Marion	1	2	12
Martin	1	1	5
Monroe			2
Nassau			4
Okaloosa			11
Okeechobee	1	3	2
Orange**	56	58	94
Osceola			3
Palm Beach**	6	8	35
Pasco			15
Pinellas**	1	1	13
Polk**	1	1	34
Putnam	1	1	5
St. Johns	1	1	4
St. Lucie	2	4	2
Santa Rosa	2	2	6
Sarasota**	1	1	24
Seminole	1	1	35
Sumter			4
Suwannee	1	3	2
Taylor			2
Union			2
Volusia**	6	7	20
Wakulla			4
Walton			5
Washington	1	1	4

*By Central Office Personnel.
**County health departments having engineering personnel.

TABLE 57

WATER AND SEWAGE WORKS OPERATORS SHORT SCHOOLS*

SHORT SCHOOL	Applicants		Voluntary Certification Examination			
			No. Taking Exam.		No. Passing Exam.	
	Water	Sewage	Water	Sewage	Water	Sewage
Annual (Univ. of Fla.)						
(1) Class "A"	3	9	3	9	1	6
(2) Class "B"	11	21	4	21	3	11
Regional						
N. E. Dist. Class "C"	19	10	8	10	4	5
N. W. Dist. Class "C"	5	4	5	4	0	1
Cent. Dist. Class "C"	13	14	13	14	6	8
S. E. Dist. Class "C"	37	32	35	32	16	22
S. W. Dist. Class "C"	16	37	16	37	7	17
Proctored Class "C"	20	18	18	18	17	11
Total Class "C"	110	115	95	115	50	64
Total Class "A", "B", "C"	124	145	102	145	54	81

*This is an inservice training program under the aegis of State Board of Health carried out jointly with Extension Division of University of Florida, the Florida Water and Sewage Works Operators Association; Florida Section, American Water Works Association; and Florida Pollution Control Association.

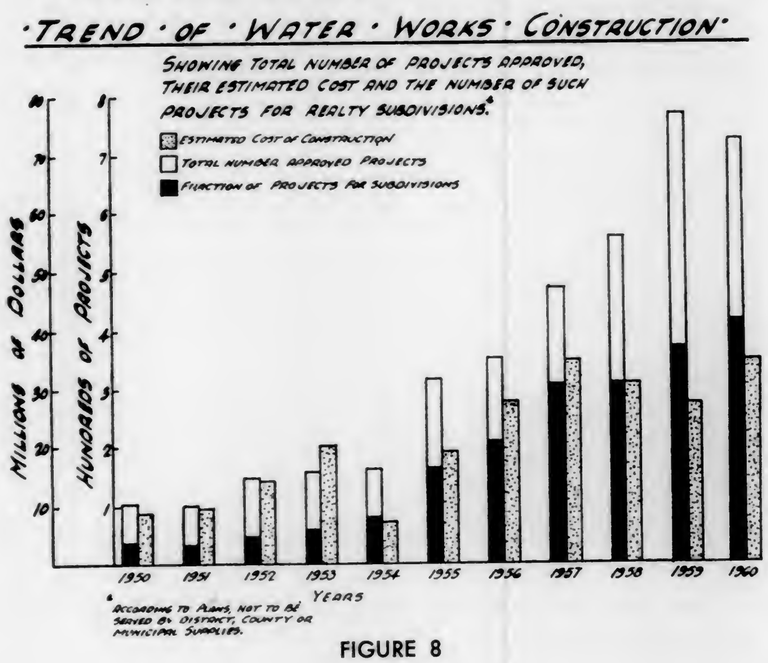

FIGURE 8

BUREAU OF MENTAL HEALTH

WAYNE YEAGER, M.D., M.P.H.
Director

MELVIN P. REID, Ph.D., M.S.Hyg.
Assistant Director

Florida shares with the rest of the nation the task of dealing with the grim problem of mental illness with inadequate professional resources. The lack of professional manpower to meet the mental health needs of the state is becoming more critical as Florida's population increases. There is very little hope that an adequate supply of trained professionals will be forthcoming within the foreseeable future. To meet this manpower challenge the State Board of Health has engaged in an intensive program to find ways of spreading the professional skills of the psychiatrist, psychologist, psychiatric social worker and psychiatric nurse to as many persons as possible. In order to do this ways are being sought to use the traditional public health teams, consisting of health officer, public health nurse, sanitarian, clerk and health educator, to provide broad linkage between mental health professionals and the citizens of Florida. Emphasis in planning is on community-oriented mental health programs supplemented with close consultative relations with psychiatric, psychological and guidance clinics, social agencies and professional organizations.

This bureau is concerned with the control and prevention of mental illness and the promotion of good mental health through efforts with community, state, regional and federal programs designed to maintain and strengthen the mental health of Florida people. It works to strengthen and coordinate varied services and programs so there will be a minimum of duplication and a maximum of preventive mental health services.

The staff of this bureau consists of a medical director and consultants in psychiatry, public health administration, mental health and psychiatric nursing, psychiatric social work, psychology and the social sciences. A consultant to serve in a liaison capacity between the State Board of Health and religious organizations in the state is being sought.

Mental illness continues to be one of the major public health problems in Florida. Approximately 45,000 persons in the state are seriously incapacitated with mental and emotional illness and over 200,000 need the services of a psychiatrist or psychiatric facility. It is estimated that 1 in 10 school children have serious emotional difficulties and need child guidance services. Also, the state mental institutions are discharging patients more rapidly and the need for more follow-up services is increasing. Based on studies over the United States, it is conservatively estimated that mental illness costs the state over $98,000,000 each year, or approximately $22 per person.

As in the past, members of the bureau staff have participated in local, state, regional and national programs involving: parent-child relationships, adjustment of the aged, alcoholism, diagnosis and treatment of

childhood emotional disorders, research and training in mental health, human relations in industry, the development of adult outpatient psychiatric services for indigents, follow-up studies for patients on trial visits from the state hospital, preadmission and concurrent assistance for state hospital patients and their families, services and programs for the retarded and brain injured, exceptional child programs in the public schools, the origin of delinquent behavior and preventive or control institutes, institutionalization of psychotic children and both formal and inservice training for mental health specialists and lay groups.

MENTAL HEALTH AND CHILD GUIDANCE CLINICS

The State Board of Health is now affiliated with 16 full-time outpatient psychiatric and child guidance clinics. The bureau offers consultation and provides training and financial assistance to these clinics. During the year considerable reorganization and growth continued to take place in several of the clinics, resulting in improved services.

In addition to the full-time clinics, the bureau provides statistical services and some specialized consultation for several part-time clinics and research projects. These organizations operate in several areas of mental health: alcoholism, community mental health, school mental health, aging, mental retardation and follow-up services for patients discharged from state institutions.

Recognizing that neither funds nor professional staff availability are likely to keep pace with Florida's tremendous growth, the clinics are making studied efforts to adapt to needs in accordance with priorities, the capacity of the clinic and maximum utilization of other professional personnel in the community. The average clinic in the state devotes 20 per cent of its professional manhours to consultation, inservice training, education and community mental health planning. Two of the clinics, Daytona and Gainesville, devote only 50 per cent or less to traditional clinical services such as diagnosis and treatment. Consultation with agencies such as the juvenile courts, visiting nurse associations, public health nurses in the county health departments, principals' association, welfare departments and others, is consistent with the philosophy of these public-health-administered services which contend that the ultimate public welfare is being served more effectively by this type of training, orientation and consultation than by spending most of their time with patients in clinical activities.

Psychiatric consultation time, which has been one of the biggest deficiencies in the clinic program, has changed considerably. Only 1 clinic now has a full time psychiatrist. Four other clinics are recruiting full-time psychiatrists, and 4 have approximately 20 hours of psychiatric coverage available per week. The remaining clinics are working toward increasing their psychiatric coverage up to a level commensurate with their needs and in compliance with the minimum standard of 20 hours per week recommended by the Florida Psychiatric Society.

TABLE 58

SOURCE OF TOTAL BUDGET FOR FLORIDA'S CHILD GUIDANCE AND COMMUNITY MENTAL HEALTH CLINICS AND AVERAGE CONTRIBUTED FOR THOSE CLINICS WHICH RECEIVE FUNDS FROM EACH SOURCE FOR PERIOD JULY 1, 1959-JUNE 30, 1960 COMBINED REPORT FOR ALL 16 CLINICS

	State Government	County Government 1	City Government 2	Community Chest 3	Patient Fees 4	Other Sources 5
Percentage	25.03	20.51	10.33	19.66	04.69	19.78
Average Amount in Dollars	24,082	19,731	9,938	18,921	4,515	19,030

1. Based on 14 of 16 clinics
2. Based on 4 of 16 clinics
3. Based on 8 clinics who participate
4. Based on 11 clinics who charge fees
5. Based on 10 clinics who have other sources

The 16 clinics in operation during 1960 were:

Division of Mental Health, Alachua County Health Department, Gainesville
Bay County Guidance Clinic, Panama City
Henderson Clinic of Broward County, Inc., Fort Lauderdale
Dade County Child Guidance Clinic, Miami
Duval County Child Guidance and Speech Correction Clinic, Jacksonville
Mental Health Clinic of Duval County, Jacksonville
Escambia County Guidance Clinic, Pensacola
Guidance Center of Hillsborough County, Tampa
Division of Mental Health, Leon County Health Detpartment, Tallahassee
Manatee-Sarasota Guidance Center, Sarasota
Orange County Guidance Clinic, Orlando
Palm Beach County Guidance Center, West Palm Beach
Child Guidance Clinic of Pinellas County, Inc., St. Petersburg
Mental Health Center of Polk County, Bartow
Indian River Mental Health Clinic, Fort Pierce
Division of Mental Health, Volusia County Health Department, Daytona Beach

MENTAL HEALTH WORKER PROGRAM

One of the most encouraging phases of the mental health effort in Florida has been the growth of the Mental Health Worker Program. The workers are growing professionally and have become an essential member of county health department teams.

This program attempts to meet the problem by sending into a community an individual with some specialized training, in order to explore new ways of working toward improved mental health in that community. This individual at present must be qualified in 1 of 4 areas: public health nursing, social work, psychology or education.

The mental health worker is assigned to the county health department and is guided by the director. To date, 30 such positions have been established in various counties in Florida. An evaluation of results to this time indicates that the exploratory phase of this program is coming to fruition and that certain consistent patterns begin to appear.

On entering a community, with an "open" field of operation, the mental health worker's first task is to establish himself as a useful person in the community. He accomplishes this by rendering individual service to patients and organizations in the community. This individual service is invariably oriented toward the worker's individual training, *e. g.* psychological testing, social work interviews, educational programs in schools, follow-up care of psychiatric patients. In performing this service, the mental health worker comes to have a recognized position in the community and is sought out as a resource person. In addition, such service affords the mental health worker an opportunity to become intimately involved in the activities of professional personnel and organizations in the community.

After this first phase—the rendering of individual service—is well underway, the worker then extends his field of operations into more public health activities. Using his position and his contacts, he proceeds to enlist voluntary and governmental agencies in treatment or preventive programs. As this is gradually accomplished mental health work is more and more carried on by the existing facilities of the community. The manpower, the financial resources and the treatment facilities thus made available are enormously greater than that which could be obtained by the addition of any number of professional people into the community.

With individual variations, the pattern described above has been followed by practically every mental health worker. One point is of crucial importance. The worker, from the start, must render some individual service in order to obtain status. At early stages of the program, however, he must carefully avoid spending more than a portion of his time in such service. If he becomes over-involved he will be hampered in his later efforts to deal with the broad social structure, and efforts to disentangle himself can result in misunderstanding and hostility on the part of clients and personnel of associated agencies.

It must be emphasized that this program is still in an early phase of growth and development. Nonetheless, results to this point justify its continuation and expansion, as the methods of refining the techniques described are further explored.

EDUCATIONAL ACTIVITIES

The purpose of the educational activities of the bureau is to help public health personnel sharpen their skills in mental health principles and practices. As in previous years, the bureau participated with finances, leadership and co-sponsorship in many different types of educational and training programs.

The bureau, in joint sponsorship with the Division of Public Health Nursing, offers workshops on Leadership and Interpersonal Skills in Mental Health and Psychiatric Nursing for small groups (8-10) of public health nursing supervisors. Faculty is selected from the behavioral sciences and 2 or more nurse specialists in mental health, in public health and psychiatric nursing.

Two to 3 months following each workshop a 1-day follow-up conference is held at which time participants are asked to identify the ways in which they have used learning experiences of the workshop and to bring any questions they would like discussed.

Interdisciplinary workshops on Human Relations and Leadership Skills are being offered through joint sponsorship of the Division of Public Health Nursing and the bureau, in cooperation with, and at the request of county health departments and local voluntary and official health and welfare agencies. Staff members from the bureau and clinics have served as resource persons and faculty. An inservice training institute for non-professional workers in psychiatric nursing was held in St. Petersburg, and a conference at Miami on psychiatric units in general hospitals was sponsored by the State Board of Health and the Department of Psychiatry of the University of Florida.

The bureau continued providing consultants and financial assistance for human relations workshops and institutes with several state and local agencies such as Florida Congress of Parents and Teachers, Vocational Rehabilitation Service, local PTAs, mental health associations, Florida Alcoholic Rehabilitation Program, University of Florida and others.

FOLLOW-UP SERVICES

During 1960 the staffs of the bureau and the county health departments continued to give strong support to patients and families with problems of mental ill health.

In 61 counties public health nurses and mental health workers made field and office visits to patients. Some patients received 1 visit; other patients received visits monthly, or more frequently if public health personnel judged the need warranted more intensive services. In 28 counties, public health nurses and health officers included services to patients on furloughs from state institutions as a part of their regular activities.

In 1959 approximately 6000 persons were admitted to mental health services by public health personnel and 2000 were patients on furlough or trial visit. In 1960 the number of persons admitted to mental health services by public health personnel was 8920, of which 3000 were former patients.

TABLE 59

SUMMARY OF MENTAL HEALTH ACTIVITIES COUNTY HEALTH DEPARTMENTS 1960

	Number Patients Admitted to Service			Number Field Visits	Number Office Visits
	Child	On Furlough	Other Adults		
Public Health Nurse	1242	1927	1304	13999	5508
Mental Health Worker	1244	843	1157	8146	8615
Health Officer	647	141	181	101	3415

RESEARCH ACTIVITIES

Although research has not been a major program in previous years, the professional staff of the bureau is now spending an increasing amount of time assisting county health departments, guidance clinics and other agencies in planning and conducting research in the field of mental health. The following are some of the research projects in which the bureau has been most active during the year:

(1) Hillsborough County Mental Health Resource Council. The research aspects of this project involve an attempt to evaluate the effectiveness of a coordinated community program that has been developed to aid in the rehabilitation of former mental patients and their families. (At present the Council has a total membership of 32 community agencies and organizations.) The plan of evaluation that is being employed is that of comparing the readjustment (occupational, family, community, etc.) of former mental patients in Hillsborough County with those in a similar county which does not have a coordinated program for this purpose. In order to evaluate the effectiveness of the program, all former mental patients in each county are being interviewed by trained interviewers 1 year after they have been furloughed or discharged from a mental institution. The study will be completed by August 30, 1961.

(2) Seminole County School Mental Health Demonstration Project. The aim of this project is to determine how rural areas, which have only limited professional mental health personnel, may utilize their existing resources to develop more effective mental health programs. To date considerable progress has been made in demonstrating how emotionally disturbed school children may be helped to make a better adjustment through the cooperative efforts of teachers and public health nurses. Since this project will terminate July 1, 1961 an effort is being made to evaluate the effectiveness of this type of school mental health program.

(3) Alcoholic Patient-Fate Study. During 1960 members of the bureau staff and a number of mental health workers assisted the Florida Alcoholic Rehabilitation Program in conducting a follow-up study of approximately 250 treated alcoholics. Essentially the study was designed to assess the patient's adjustment in the areas of employment, family relations, drinking habits, community relations, et cetera. In addition, an attempt was made to determine what types or combinations of treatment were most effective in facilitating the rehabilitation of alcoholics.

(4) Rural Family Life Education Project. During 1960 the bureau worked with the Florida Congress of Parents and Teachers, the Florida Children's Commission and the General Extension Division of the University of Florida in an attempt to evaluate the family life education and child development workshops which they conduct. While it was found that the workshops are reaching many people it was revealed that in most instances they are not reaching persons from the working classes and rural areas. As a result a cooperative project is now being undertaken in several rural communities to develop methods for reaching these families. In addition to the benefits derived in this area it is believed that the findings of this study will be of assistance to public health nurses, sanitarians, mental health workers and others who often work with this segment of the population.

In addition to the preceding, the bureau staff participated to a lesser degree in several other research projects. At present plans are underway for conducting cooperative research projects with the Department of Sociology of Florida State University and with several county health departments and child guidance clinics. Since many of the mental health programs in the state are now reaching a point of stability in staff and program, it appears that in the future an increasing amount of the time of the bureau staff will be devoted to research devised to evaluate the effectiveness of existing programs and to develop more effective methods of preventing and treating mental disorders.

Articles by staff members:

Karson, S. Validating clinical judgments with the 16 p. f. test. J. Clin. Psychol. 16:394-97, Oct. 1960.

Smith, G. F., Loeffer, F. J., McGrath, F. C., Martin, M. J. Developmental evaluation clinic: A new diagnostic and counseling service for pre-school children. J. Florida M. Asso. 46:970-72, Feb. 1960.

Yeager, W. Seminole County School Mental Health Project—Progress Report. J. Florida M. Asso. 47:526-29, Nov. 1960.

TABLE 60

DISCHARGED PATIENTS BY CLINICS, TYPE OF SERVICE, CONDITION ON TERMINATION, REFERRAL SOURCE, AND NUMBER OF NEW CASES FLORIDA CHILD GUIDANCE CLINICS JANUARY 1, 1960—DECEMBER 31, 1960

CLINIC	Total Patients	TYPE OF SERVICE				CONDITION ON TERMINATION			REFERRAL SOURCE						Number of New Cases
		Diagnosis and Treatment	Diagnostic Study Only	Psychological Testing Only	Other Services Only	Improved after Treatment	Unimproved after Treatment	Not Treated	Self	School	Court	Agency	Physician	Other	
FLORIDA TOTAL	5,539	1,546	2,054	267	1,672	1,152	394	3,993	1,602	977	465	998	1,088	409	4,793
Alachua (J. Hillis Miller)	132	96	32	.....	4	46	50	36	7	2	2	14	105	2	125
Bay	184	50	51	23	60	36	14	134	46	33	8	.....	32	18	156
Broward	628	141	202	4	281	113	28	487	189	50	44	117	168	60	557
Dade	287	77	58	5	147	64	13	210	248	14	3	10	11	1	245
Duval (Child Guidance Clinic)	597	162	247	1	187	128	34	435	161	123	37	80	154	42	486
Duval (Mental Health Clinic)	241	132	39	11	59	97	35	109	26	2	1	55	105	52	235
Escambia	529	181	177	29	142	112	69	348	220	72	17	135	80	5	461
Hillsborough	480	72	298	61	49	58	14	408	63	75	174	115	46	7	440
Leon	448	165	46	81	156	131	34	283	96	134	24	60	52	82	871
Manatee-Sarasota	210	28	77	6	99	19	9	182	65	33	22	28	42	20	194
Orange	536	156	174	4	202	133	23	380	93	167	49	99	62	66	463
Palm Beach	296	64	154	27	51	44	20	232	120	51	8	62	48	7	266
Pinellas (St. Pete-Clearwater)	451	71	290	.....	90	63	8	380	158	87	37	119	38	12	349
Polk	191	64	64	3	60	50	14	127	56	35	24	30	33	13	172
St. Lucie	148	54	67	12	15	36	18	94	.....	58	.....	1	88	1	143
Volusia	181	33	78	.....	70	22	11	148	54	41	15	26	24	21	130

TABLE 61

DISCHARGED PATIENTS BY AGE, RACE, SEX, DIAGNOSIS, AND NUMBER TREATED FLORIDA CHILD GUIDANCE CLINICS JANUARY 1, 1960—DECEMBER 31, 1960

DIAGNOSIS	Total Patients	AGE IN YEARS									RACE AND SEX				Number Treated
		0-4	5-9	10-13	14-17	18-20	21-29	30-44	45-64	65 & over	White		Nonwhite		
											Male	Fem.	Male	Fem.	
FLORIDA TOTAL	5,539	383	1,550	1,282	932	136	414	587	229	26	3,018	227	2,078	216	1,546
BRAIN SYNDROMES (Acute, Chronic) Associated with convulsive disorder (Idiopathic Epilepsy)	80	3	31	22	13	3	7	.....	1	.....	44	3	29	4	40
Associated with Cerebral Arteriosclerosis or Senile Brain disease	7	.....	.....	.....	.....	.....	.....	.....	3	4	3	.....	4	.....	2
All Other Brain Syndromes	244	35	118	49	24	6	5	3	3	1	168	16	54	6	64
MENTAL DEFICIENCY (Familial or Hereditary)															
Mild	53	2	15	15	17	.....	3	1	.....	.....	23	11	18	1	1
Moderate	30	2	12	6	9	1	.....	.....	.....	.....	9	4	13	4	.....
Severe	9	1	4	2	2	.....	.....	.....	.....	.....	3	2	4	.....	.....
Severity not specified	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
MENTAL DEFICIENCY (Idiopathic)															
Mild	169	12	63	50	39	1	2	1	1	.....	84	18	57	10	21
Moderate	122	11	46	29	20	5	3	4	4	.....	62	12	32	16	4
Severe	49	4	17	17	4	1	2	2	2	.....	14	11	11	13	1
Severity not specified	10	3	4	1	.....	.....	.....	.....	2	.....	5	1	3	1	1
PSYCHOTIC DISORDERS															
Involutional Psychotic Reaction	4	.....	.....	.....	.....	.....	.....	.....	4	.....	1	1	2	.....	1
Affective Reactions	14	.....	.....	.....	.....	1	1	4	8	.....	4	1	8	1	10
Schizophrenic Reactions	218	2	14	20	41	18	46	60	17	.....	88	11	101	18	121
Paranoid Reactions	9	.....	.....	.....	.....	.....	.....	7	2	.....	5	.....	3	1	6
Other Psychotic Reactions	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	1
PSYCHOPHYSIOLOGIC AUTONOMIC AND VISCERAL DISORDERS (Psychosomatic Disorders & Organ Neuroses)	42	.....	8	14	3	1	8	6	2	.....	23	1	18	.....	23

TABLE 61 (Continued)
DISCHARGED PATIENTS BY AGE, RACE, SEX, DIAGNOSIS, AND NUMBER TREATED
FLORIDA CHILD GUIDANCE CLINICS
JANUARY 1, 1960—DECEMBER 31, 1960

DIAGNOSIS	Total Patients	AGE IN YEARS									RACE AND SEX				Number Treated
		0-4	5-9	10-13	14-17	18-20	21-29	30-44	45-64	65 & over	White		Nonwhite		
											Male	F m.	Male	Fem.	
PSYCHONEUROTIC DISORDERS															
Anxiety Reaction	270	2	75	68	27	5	36	42	15		150	3	112	5	165
Dissociative Reaction	11		2	1	3	1	1	3			1		8	2	9
Conversion Reaction	28		3	8	7	3	2	3	2		6	1	21		15
Phobic Reaction	12		3	5	3				1		8		8	1	6
Obsessive Compulsive Reaction	27			8	4		5	10			12		15		16
Depressive Reaction	92	1		4	4	1	19	42	17	2	23	1	63	5	71
Psychoneurotic Reaction, Other	80		3	7	5		4	10	1		11		19		18
PERSONALITY DISORDERS															
Personality Pattern Disturbance	215	1	25	48	57	10	26	86	12		120	5	83	7	108
Personality Trait Disturbance	561	5	102	164	140	8	53	74	15		351	11	188	11	274
Sociopathic Personality Disturbance	98		3	18	36	3	13	19	6		59		32	7	39
Special Symptom Reaction	114		56	21	8						86		27	1	55
TRANSIENT SITUATIONAL PERSONALITY DISORDERS															
Gross Stress Reaction	10	1	2	2	2		2	1			1		8	1	8
Adult Situational Reaction	68					3	16	35	12	2	18	1	49		55
Adjustment Reaction of Infancy	1		1		1						1				
Adjustment Reaction of Childhood	583	38	353	191	175	5					393	10	171	9	292
Adjustment Reaction of Adolescence	278			98			1	1	1	3	138	8	127	5	119
Adjustment Reaction of Late Life	6										2	1	2	1	4
Other	1				1						1				
NO PSYCHIATRIC DISORDER FOUND	130	63	40	14	7	2	1		3		81	3	40	6	
NO DIAGNOSIS MADE	1,942	167	548	400	280	58	158	222	95	14	1,025	90	747	80	1

FLORIDA COUNCIL ON TRAINING AND RESEARCH IN MENTAL HEALTH

The Council consisted of the following members during 1960:

William M. C. Wilhoit, M.D., Pensacola, Chairman
Melvin P. Reid, Ph.D., Jacksonville, Vice Chairman and Secretary
Mrs. James P. Anderson, Miami
John T. Benbow, M.D., Macclenny
Mrs. Barbara Buchanan, Gainesville
Mr. Loyal Frisbie, Bartow
Mrs. E. W. Gautier, New Smyrna Beach
Victor B. Johnson, Ed.D., Tallahassee
Mrs. Sonia L. King, Miami
Major Gen. J. K. Lacey, Panama City
Canon Robert J. McCloskey, Jacksonville
Coyle E. Moore, Ph.D., Tallahassee
Kent S. Miller, Ph.D., Tallahassee

Dr. Wilhoit was re-elected Chairman and Mr. Frisbie was elected Vice Chairman and Secretary for the fiscal year beginning July 1, 1960. Mrs. Buchanan was appointed a member of the Council in September to succeed Mrs. King whose term had expired. Dr. Reid was reappointed to the Council succeeding Dr. Miller who resigned because of out-of-state educational leave. During the year 3 meetings were held in Tallahassee, 1 in St. Petersburg and 1 in Miami.

The Council was created by the 1955 Legislature. At the end of 1960, training had been completed by 11 residents in psychiatry, 5 clinical psychologists, 12 psychiatric nurses and 31 psychiatric social workers. During this period 17 recipients of stipends withdrew before completing their training. These included a resident in psychiatry and a psychiatric nurse, 5 psychologists and 10 psychiatric social workers. Presently those in training include 9 residents in psychiatry, 8 clinical psychologists, 3 psychiatric nurses and 16 psychiatric social workers. (The names of stipend recipients in 1960 are given elsewhere in this Report.)

On recommendation of the Council the State Board of Health granted $14,276 for research in mental health as follows:

Changing general hospital milieu to aid mentally ill
Frank L. Creel, M.D., practicing psychiatrist, Pensacola, principal investigator $4000

A project in the application of public health methods in mental health in a university student health service setting
Henry C. Schumacher, M.D., university psychiatrist, Gainesville, principal investigator 1076

A multi-factor study to investigate many hypotheses of dealing with patients in a mental hygiene clinic
John J. Wright, Ph.D., clinical psychologist, Fort Lauderdale, principal investigator 2500

Rehabilitation of former mental hospital patients
John S. Neill, M.D., M.P.H., county health officer, Tampa, principal investigator 2500

Assessment of current practices in the detection and care of alcoholics in Sarasota County
William L. Wright, M.D., county health officer, Sarasota, principal investigator 2200

Generalization of reinforced non-delusional verbal responses in psychotic patients
H. L. Waskom, Ph.D. and Joel Greenspoon, Ph.D., Psychology Department, Florida State University, Tallahassee, principal investigators 2000

The following institutes were cosponsored by the Mental Health Council during 1960: Psychiatric Nursing on Inservice Training for Nonprofessional Workers; Pastoral Care, Mental Hygiene and Counseling; The Changing Roles of the Clinical Psychologist; and Orientation to Crisis Intervention.

BUREAU OF NARCOTICS

FRANK S. CASTOR, Ph.G.
Director

The Bureau of Narcotics is charged with the control of narcotics, legal and illegal; the registering of practitioners of the healing arts; hospitals; drug stores and others permitted by law to dispense or administer narcotics; the control of barbiturates and amphetamines; the enforcement of the pharmacy and medical healing arts laws; registering physical therapists and masseurs. All inspectors have police powers for making arrests and assisting other offices in preparing cases for court action.

The bureau is gratified to be able to report a decrease in arrests for narcotic violations despite an increase in the state's population, the political turbulence among the Latin element population and a considerable increase in the numbers of this ethnic group. The year was significant in seeing a growth in the barbiturate and amphetamine problem, an increase in the propagation of marihuana and a considerable higher number of commitments for addiction brought on by the use of paregoric and narcotic cough syrups.

The administrative office of the bureau is in Jacksonville. The work is carried on from 4 district offices, located in Jacksonville, Tallahassee, Tampa and Miami. City detectives are assigned to the staffs of each of the offices except Tallahassee, thus aiding greatly in the coordination of activities in these areas. Close cooperation is also achieved with the federal narcotic inspectors, Federal Food and Drug Inspectors and with the State Sheriffs Bureau as well as with all other county and municipal police agencies. This is done with an inspector staff of 9; 1 assigned to Tallahassee, 2 to Tampa and 3 each to Jacksonville and Miami.

Bureau officers made 205 arrests during the year, 123 of which were for narcotic violations. As in recent years the majority of these cases involved nonwhite young adults living along the lower east coast. Additional cases were also made in which federal statutes such as U. S. Customs, etc., were involved and state inspectors worked closely with federal officers on these.

Heroin, the narcotic drug which in the public mind is regarded as most to be dreaded and which is not available through any legitimate channel, continues to require serious consideration. Since it is not manufactured in the United States and since it is enormously profitable to traffickers, this drug might present a serious problem. Other factors are Florida's 2000 mile coast line and its millions of visitors each year. However, it is the stated opinion of law officers generally that Florida has been doing a remarkable job in this category of enforcement.

Cocaine, absent from the state for many years, has recently turned up again. This is thought to be due to the changing population picture

in the state and the inspectors are concerned about it. Paregoric, the common non-prescription preparation and the opium obtained by boiling down this product, as well as cough syrups containing narcotics, have been responsible for the commitment of 25 persons for addiction treatment. This is a significant increase in such commitments and enforcement officers feel that paregoric should not be sold without a prescription.

Marihuana smoking which has been a practice since the time of prehistoric Indians remains a major consideration. This habit, dangerous in itself because of its effect on behavior, is the more serious because it so frequently leads to the use of stronger narcotics. This year inspectors in the southern part of the State reported that a "veritable farm" of the weed had been found under cultivation. Sometimes called Indian hemp, marihuana grows easily anywhere in Florida and can actually spring up without knowledge of the landowner. Vigorous efforts are being made to keep this plant under control and to educate the public to recognize and eliminate it.

Arrests for violations other than narcotics totalled 82. These included 5 pharmacy violations; 6 medical; 46 barbiturate and amphetamine; 25 commitments. This represents an increase in arrests for amphetamines (benzedrine-dexedrine) which cannot legally be sold without a prescription but which are often bootlegged to those who crave their stimulant effect. The problem is concentrated around truck stops and amusement places. An interesting sidelight is noted in the fact that caffeine citrate tablets, approximately equivalent to a cup of coffee, are being sold as amphetamine tablets. These are not illegal but are represented to the customer as being the illegal amphetamine known as "bennies" as well as by other common names.

Total fines assessed by the courts were up substantially over the previous year. This is gratifying as it has been the experience of the bureau that violations decrease in areas where the courts are known to be stern in meting out punishment to offenders.

Education of the public continues to be considered second in importance only to the actual enforcement of the major laws entrusted to the jurisdiction of the bureau. This took the form primarily of talks before citizens' groups. There were 66 illustrated talks made to approximately 2500 people which included PTA meetings, school and university classes, police training groups, nurses, pharmaceutical and medical societies. In these talks the officers emphasized the need for public support of the laws enforced by the bureau, pointing out the benefits to be derived from strong enforcement.

The inspectors also advised pharmacists, hospital administrators and practitioners on how better to comply with state laws and cooperate with the bureau's efforts on behalf of the public. It is emphasized that many hundreds of hours of the inspectors' time are devoted to such visits, involving no arrests or complaints, but adding immeasurably to the amount of cooperation and smooth administration of state statutes.

One notable improvement in the administration of the law concerning prescriptions for narcotics was recorded when pharmacists and physicians cooperated admirably with the directive that type A narcotics—those which are addictive—might not be called in by the physician to the pharmacist by telephone. Abuse of this practice in the past has been known to contribute to the facility with which addicts could secure drugs. Such persons were known to obtain narcotic drugs from legitimate channels by feigning illnesses, such as kidney colic, etc.

Arresting only when necessary and educating wherever possible, the personnel of this bureau has been carrying on its battle to protect the people of Florida by controlling the narcotic violator. The vicious peddler of illegal drugs and the crazed victim are both sought and brought under restraint. The unethical or inadequately trained practitioner who for selfish gain would endanger the health of our citizens must also be found and made ineffective.

TABLE 62
SUMMARY OF ACTIVITIES

Number open inspections	1338
Number investigations	1831
Number arrests	205
Number violations corrected where no legal action was taken	31
Aggregate sentences imposed by the courts	162 years, 60 days
Aggregate fines imposed by courts	$14,365.00
Defendants receiving probation, deferred, withheld or suspended sentences	56
Cases discharged or nolle prosequi by courts	13
Cases placed on absentee docket	7
Number narcotic addicts confined to state or federal institutions for treatment	25
Number persons acquitted by the courts	15
Number persons declared insane	1
Number talks made	66
Number drug stores registered for 1960-61	1455
Bonds estreated	$1,000.00

TABLE 63

MEDICAL PRACTITIONERS REGISTERED WITH THE BUREAU OF NARCOTICS BY PLACE OF RESIDENCE AS OF DECEMBER 31, 1960 (EXCLUDES DECEASED PRACTITIONERS)

County	Total	Medical Doctors	Osteo-paths	Chiro-practors	Naturo-paths	Chiropo-dists	Physio-therapists
Total in State	6,580	5,087	434	551	151	150	207
Alachua	135	120	2	5		2	6
Baker	4	4					
Bay	51	40	3	5		1	2
Bradford	10	8	1	1			
Brevard	96	76	2	14		3	1
Broward	497	355	58	41	12	15	16
Calhoun	4	3		1			
Charlotte	9	7		2			
Citrus	9	7		1			1
Clay	14	13	1				
Collier	17	14	1	2			
Columbia	12	10		1			1
Dade	1,948	1,559	117	124	53	42	53
DeSoto	11	9	1	1			
Dixie	1	1					
Duval	512	437	13	34	8	8	12
Escambia	150	131	1	11		2	5
Flagler	3	3					
Franklin	7	5	2				
Gadsden	18	17	1				
Gilchrist	1	1					
Glades	0						
Gulf	6	6					
Hamilton	4	4					
Hardee	9	8		1			
Hendry	7	5	1	1			
Hernando	9	7	1	1			
Highlands	19	15	2	2			
Hillsborough	447	341	20	37	26	11	12
Holmes	4	3		1			
Indian River	26	20	2	2		1	1
Jackson	17	15	1	1			
Jefferson	4	4					
Lafayette	1	1					
Lake	57	40	3	9		2	3
Lee	63	49	3	7	2	1	1
Leon	90	72	4	4	2	2	6
Levy	3	3					
Liberty	0						
Madison	6	5	1				
Manatee	83	54	10	13	4	1	1
Marion	51	42	4	4			1
Martin	12	11		1			
Monroe	38	30	3	3	1		1
Nassau	7	7					
Okaloosa	27	23		4			
Okeechobee	4	3		1			
Orange	405	298	31	42	8	9	17
Osceola	17	10	4	3			
Palm Beach	340	263	16	36	4	9	12
Pasco	24	12	7	5			
Pinellas	587	389	76	57	20	22	23
Polk	213	171	6	22	2	5	7
Putnam	24	18	1	4	1		
St. Johns	23	19	1	2		1	
St. Lucie	31	24	3	3		1	
Santa Rosa	12	11		1			
Sarasota	147	102	5	15	4	5	16
Seminole	39	32	1	4	1		1
Sumter	4	3	1				
Suwannee	8	7		1			
Taylor	8	5		2	1		
Union	2	2					
Volusia	179	120	24	18	2	7	8
Wakulla	2	2					
Walton	8	8					
Washington	4	3		1			
Out of State	3,119	2,639	179	197		56	48
TOTAL	9,699	7,726	613	748	151	206	255

BUREAU OF ENTOMOLOGY

J. A. MULRENNAN, B.S.A.
Director

Program activities remained about the same as in recent years, with the exception that during the early part of the year, the bureau was given the added responsibility of regulating and controlling the use of highly toxic pesticides in lawn spraying operations. Other activities in general were enforcement of the Florida Structural Pest Control Act; operation of research laboratories at Vero Beach and Winter Haven; operation of the arthropod identification laboratory in Jacksonville; and statewide technical and financial assistance to counties and cities in controlling arthropods of public health importance.

The central office staff during the year increased the number of employees in the identification laboratory from 2 full-time and 1 half-time employees to 3 full-time employees. One clerk-typist was employed and assigned to the entomologist responsible for enforcement of the Structural Pest Control Act. The position of staff entomologist in charge of entomological field activities remained vacant. The field staff of the central office, aside from the director, consisted of 1 sanitary engineer, 1 clerk, 1 structural pest control entomologist and 1 regional entomologist.

Florida experienced one of the most disastrous hurricanes in many years when Hurricane Donna crossed the Florida Keys on September 10 and completely devastated the area from Tavernier to Marathon. Then, curving north and northeast across the state on September 11, millions of dollars of damage was done, leaving numerous populated areas in a disaster condition. Mosquito control organizations with their vehicles, tractors, bulldozers, draglines, airplanes and personnel immediately went into action on an around-the-clock basis to assist other county and state forces in disposal of debris, reopening blocked roads, re-establishing sanitation controls, restoring water supplies and carrying on rodent and insect control.

ARTHROPOD-BORNE DISEASES

ENCEPHALITIDES

An outbreak of St. Louis encephalitis in Pinellas County was reported in the 1959 Annual Report. Sixty-eight cases were clinically confirmed, including 23 laboratory confirmed cases, and 5 deaths occurred. Two cases of arthropod-borne encephalitis in the state were reported in 1958, 73 cases in 1959 and, in 1960, 2 cases were reported. (See report of Division of Epidemiology elsewhere in this Report.)

The Rockefeller Foundation and Yale University reported in 1960 on the results of a survey made in Highlands County, Florida, during which they found the blood of a purple grackle infected with Eastern encephalitis virus. This particular virus has a mortality rate of 65 to 75 per cent in human beings. They also found a collection of *Culex* species

mosquitoes with the same type of virus. A blue jay in Highlands County was found infected with a new type of virus, which has been named Highlands-J. The common salt-marsh mosquito, *Aedes taeniorhynchus,* was found infected with Western encephalitis. This was the first confirmed report of the isolation of this virus from mosquitoes in Florida. Three other species of mosquitoes, *Mansonia perturbans, Mansonia indubitans* and *Culex nigripalpus,* have also been found infected with an unidentified virus strain. Therefore, at the present time it is known that 4 arthropod-borne encephalitides are found in Florida—Eastern encephalitis, Western encephalitis, St. Louis encephalitis, Venezuelan equine encephalitis plus 3 other closely related viruses which may cause human illness.

The Rockefeller Foundation's survey of blood tests performed on Indians in the Big Cypress and Brighton Reservations revealed that in the Big Cypress Reservation, 57 per cent of the Indians tested showed the presence of antibodies for Venezuelan equine encephalitis and 25 per cent for St. Louis encephalitis. The Indians in the Brighton Reservation showed 16 per cent positive for St. Louis and 7 per cent for Venezuelan equine encephalitis. This means that these Indians were bitten in the past by mosquitoes carrying these diseases.

MALARIA AND TYPHUS

Three cases of malaria and no cases of typhus were reported this year. The malaria cases were reported from Dade County and were proven to have been contracted in foreign countries—1 in Africa; 1 in El Salvador; and 1, a pilot on an international airline run, in either Jamaica, Ecuador or Panama. No indigenous malaria transmission in Florida has been proven since 1948.

The bureau maintains a continuing surveillance program, and an immediate investigation is made when a case of either malaria or typhus is reported. If indicated, preventive steps are taken to insure a very minimum possibility of transmission of the disease due to the presence of an infected individual.

ARTHROPOD CONTROL

SOURCE REDUCTION ACCOMPLISHMENTS

The control of the arthropod vectors of disease becomes increasingly important. Although the control of salt-marsh mosquitoes is still the major problem in most of Florida's coastal counties, it is pleasing to note that significant progress is being made in reducing the mosquito populations. This reduction can be attributed to the long range program of building out the breeding areas through permanent control measures, plus the use of more improved materials, equipment and techniques developed for temporary control measures by the Entomological Research Center. Using the mosquito light trap records as a basis for evaluation and comparing 1956 with 1960 records, a reduction of 84 per cent, 70 per cent and 70 per cent in the numbers of female *A. taeniorhyncus* mosquitoes has been obtained in Lee, Sarasota and Brevard counties

respectively in the last 5 years. Many other counties also show significant reductions in the same percentage range.

In several counties the fresh-water species of mosquitoes are becoming more of a problem due to real estate developers frequently locating housing developments within, or near, areas that breed fresh-water mosquitoes. Appropriate control measures are being taken in these situations.

Counties and districts in some instances found it necessary to curtail the amount of permanent control work performed as the state funds available for this purpose continued to decline. At the beginning of the calendar year the matching rate was 40 per cent and by the end of the year only 35 per cent. Most of the counties financially able to do so supplemented the state funds with local funds, in order to maintain their source reduction program at the previous year's level.

There follows a summary of the work accomplished and cost of various source reduction activities:

TABLE 64

	1959	1960
Machine Ditching		
No. of counties participating	30	31
Miles of ditches dug or maintained	529.25	556.31
Cubic yards earth excavated	3,960,300	4,301,976
Average labor cost per cubic yard	$0.092	$0.091
Diking		
No. of counties participating	5	5
Miles of dikes constructed	28.26	57.30
Cubic yards earth excavated	359,100	649,917
Average labor cost per cubic yard	$0.087	$0.097
Hydraulic Dredging		
No. of counties participating	3	4
No. of dredges used	4	5
Cubic yards earth fill placed	906,300	1,116,379
Average labor cost per cubic yard	$0.123	$0.107
No. acres mosquito breeding area eliminated	183	179.85
Deepening and Filling		
No. of acres improved		70.97
Average labor cost per acre		$134.44
Cisterns, Cesspools, and Wells Filled		
No. of counties participating	1	1
No. cubic yards fill material required	2,139	794
No. cisterns, etc., filled	205	93
Average cost per cistern (labor & fill)	$41.60	$67.91
Vertical Drainage		
No. of counties participating	1	1
No. of holes drilled and blasted	519	2,037
Average cost per hole (labor & dynamite)	$17.25	$11.96
No. acres breeding area controlled	320	1,860
Sanitary Landfills		
No. of counties & districts participating	29	31
No. landfill sites operated	63	75
Cubic yards garbage buried	2,686,000	3,521,654
Average labor cost per cubic yard	$0.08	$0.072

TEMPORARY CONTROL MEASURES

Temporary control measures consist of the application of chemicals for the control of arthropods in either, or both, the immature or adult stage. The adult stages of mosquitoes, midges and gnats are normally controlled with ground equipment, which applies a malathion-lethane-fuel oil formulation as a fog. Forty-seven counties and districts carried out this type of work. An additional 4 counties relied on the ground application of insecticides in either dust or mist form.

A few counties also employed airplanes to apply insecticide in the form of fog or spray for the control of adults.

The method of controlling mosquito larvae with Paris green coated vermiculite pellets, as developed by the Entomological Research Center at Vero Beach, was used in extensive airplane applications on Sanibel Island and near Miami during 1960. The results at Sanibel were very gratifying, and, while not spectacular in Miami, did give a basis for perfecting commercial mixing techniques, so that uniformly high kill can be expected in the future.

Two new makes of thermal-aerosol machines were placed on the market by the manufacturer, following a lengthy period of field testing and evaluation by the Entomological Research Center and Indian River Mosquito Control District. Both of these machines are beginning to be widely accepted by counties and districts when new or replacement thermal-aerosol machines are bought.

The following is a summary of the ground adulticiding work performed by counties and districts in 1960:

TABLE 65

Miles fogged	231,892	
Gallons insecticidal formulation applied	1,368,571	
Labor cost per mile fogged		$0.706
Miles misted or dusted	11,215	
Pounds of insecticide applied	192,427	
Labor cost per mile sprayed or dusted		$1.32

ENGINEERING

Proposed programs and budgets were reviewed for all of the 52 arthropod control units participating in the State Aid program. Field review of proposed projects was made, and assistance given the directors when requested in program and project planning. Program operation and progress was checked in the field with various directors.

Close liaison was maintained with the State Auditing Department pertaining to the records required to be kept by each district.

The monthly progress reports on various activities of the districts were tabulated and analyzed. Unit labor costs for activities were computed, and at the end of the year annual totals by items of work were

obtained for each county and district. From these totals a statewide total was prepared.

The monthly reports of receipts and expenditures by each county or district were carefully checked, and a constant running record maintained in each district's file. Requests by counties and districts for aid in maintenance of their records were frequent, and numerous visits were made to their offices to render assistance.

COUNTIES PARTICIPATING AND LOCAL FUND BUDGETS

The following counties participated in the State Arthropod Control Program during the year. Based on the fiscal year of the counties and as of December 31, 1960, the total amounts of local funds shown in the certified budgets for arthropod control activities are as follows:

TABLE 66

Alachua	$ 24,053	Lee (Ft. Myers Beach)	$ 36,652
Bay	52,588	Leon	60,000
Bay (Gulf Beaches)	35,714	Levy	11,000
Bradford	8,722	Madison	1,345
Brevard	242,717	Manatee	60,500
Broward	62,000	Martin	25,377
Calhoun	2,986	Monroe	106,000
Charlotte	33,000	Nassau (Amelia Island)	42,857
Citrus	70,651	Okaloosa	22,684
Collier	54,831	Orange	53,457
Dade	240,788	Osceola (Kissimmee)	5,778
Duval	54,434	Palm Beach	212,506
Escambia	105,579	Pasco	34,212
Flagler	11,786	Pinellas	227,332
Franklin	12,000	Polk	144,948
Gadsden	7,760	Putnam	8,850
Gulf	24,000	St. Johns	37,159
Hardee	2,555	St. Lucie	96,900
Hernando	2,505	Santa Rosa	15,768
Highlands	4,039	Sarasota	60,000
Hillsborough	182,070	Suwannee	9,373
Indian River	221,685	Taylor	4,474
Jackson	6,319	Volusia (Regular)	181,032
Jefferson	9,569	Volusia (Landfill)	15,720
Lake	71,545	Wakulla	12,500
Lee County	271,035	Walton	4,800
		Washington	5,317
Total of local funds appropriated			$3,311,471
Total of funds appropriated by the state			1,650,000
GRAND TOTAL			$4,961,471

DOG FLY CONTROL

Dog flies present a problem in that area of Florida from Tallahassee westward through Escambia County. They are rarely found in significant numbers very far inland from the shoreline of the Gulf of Mexico, including the inlets and bays.

Several influential citizens in West Florida have become actively interested in promoting the establishment of a Bureau of Entomology operated research center in that general area, in order to learn more about the ecology of dog flies and to promote the development of better control methods. It is expected that this group will sponsor a bill in the 1961 legislative session which would, if passed, provide for the construction and operation of this laboratory.

Dog fly breeding occurs principally in the deposits of submerged grass as washed ashore from the bays during the summer months. Control measures consist of spraying the grass deposits with a 5 per cent DDT water emulsion at weekly intervals, usually from July through October.

Control methods carried out during 1960 were seemingly effective in preventing the emergence of dog flies in any appreciable numbers. A total of 3139 miles of shoreline was treated, using 12,691 gallons of 5 per cent DDT emulsifiable concentrate. The average labor cost was $3.96 per mile, ranging from $1.49 in Bay County to $13.71 in Wakulla County. The total cost for labor was $12,446.00 for 10,221 man-hours of labor in 8 counties.

REGIONAL ENTOMOLOGISTS' ACTIVITIES

The 5 regional entomologists continued to assist the counties and districts in mosquito control and landfill operations by reviewing and selecting projects and sites, preparing project proposals and budgets, evaluating the effectiveness of mosquito control and garbage disposal operations, and advising on herbicidal and odor control problems.

Special mention is made of the following entomological activities: The investigation, recommendations for, and later the actual control of an enormous infestation of *Culex quinquefasciatus* at Palatka caused by sewage treatment plant effluent; the inauguration of a new control district in Jefferson County, where *Mansonia perturbans* from Lake Miccosukee are the principal annoyance (both species are potential carriers of encephalitis); the giving of assistance to West Florida citizens in planning for the establishment of a new research laboratory as mentioned above.

Participation in the training course for sanitarians has continued. Many insect complaints occurring in the counties are referred to the sanitarians; and it is vital that they be able to recognize and evaluate the problems.

The 5 regional entomologists of the State Board of Health rendered invaluable assistance to the structural pest control entomologist in performing investigations and assisting in enforcement of the law. Fraudulent operations, accidents and 2 cases involving deaths from poisoning were investigated and reported in writing and at public hearings.

ARTHROPOD IDENTIFICATION LABORATORY

As in previous years, the laboratory was maintained at the central office, for the purpose of identifying mosquitoes, household insects, arthropods of public health importance and other pests.

The expanded light trapping program, begun in 1954 to study the mosquito fauna, and to determine the effectiveness of district mosquito control programs, was continued. During the year 110 traps were operated semi-weekly in 52 counties. A total of 1,191,172 adults was identified from these traps, together with 79 special collections. Also 925 mosquito larvae from 30 collections were identified, as well as many arthropods sent in by county health departments, mosquito control districts, pest control operators, private physicians and individuals. In addition, approximately 1000 midges, representing over 100 species, were identified from the light trap collections.

The "Salt Marsh Mosquitogram," an information sheet begun in 1954, giving semi-weekly collection counts of salt-marsh mosquitoes in 43 selected coastal traps, was again distributed weekly. Continuous information on the salt-marsh mosquito population was thus provided to the mosquito control districts and counties where the traps are operated.

Each county and district engaged in mosquito control activities was also provided with a monthly and annual summary of the species and numbers of mosquitoes taken in traps within their boundaries.

STRUCTURAL PEST CONTROL

The Florida Structural Pest Control Act of 1947, amended in 1955, was superseded by a new Florida Structural Pest Control Act which became effective on October 1, 1959. The State Board of Health continued as the principal enforcement agency of the Act and was empowered with the authority for formulating necessary rules. Passage of the new law made it necessary to revise these rules again; and the sixth such revision since the original Act was passed in 1947 was adopted and took effect March 18, 1960.

Close liaison and cooperation was maintained with the industry and the Florida Structural Pest Control Commission. Upon successfully passing written examinations, this Commission issues certificates to qualified applicants to engage in structural pest control work, following which the State Board of Health, upon receipt of application, issues business licenses. It is necessary for a firm to have 1 or more certified operators in charge of its structural pest control activities before it can be issued a license.

The year was noted by a marked increase in the number of licensees and employees operating in the State. The former increased from 228 in 1959 to 261 in 1960, and the latter from 2232 to 2854 in the same period. There were only 144 licensees employing 456 card holders in 1948. The Commission renewed 335 active structural pest control certificates in 1960.

The number of homeowner complaints investigated decreased about 46 per cent from the previous year, reflecting a maturing, better qualified and more responsible industry when considered as a whole.

TABLE 67

SUMMARY OF STRUCTURAL PEST CONTROL ADMINISTRATION AND ENFORCEMENT IN THE STATE OF FLORIDA

Registration	1956	1957	1958	1959	1960
State Board of Health Licenses issued	210	226	228	228	261
State Board of Health Licenses revoked*	1	2	0	2	2
State Board of Health Licenses placed on probation*	.....	6	1	0	5
Employees' Identification Cards issued	1485	1738	2152	2232	2854
Employees' Identification Cards revoked*	.....	.....	.....	8	1
Thermal-Aerosol Certificates of Authorization renewed*	14	13	14	14	12
Enforcement					
Homeowner complaints investigated	90	91	97	162	87
Violations of Law and Rules reported	.....	.....	.....	.....	80
Unlicensed illegal pest control operators investigated	15	22	5	9	15
Charges preferred against unlicensed illegal pest control operators	8	3	2	1	5
Letters of warning written to unlicensed illegal pest control operators	.....	.....	.....	2	6

*By Structural Pest Control Commission of Florida

RESIDENTIAL LAWN SPRAYING

As the result of a further need to protect the general public and personal health in Florida, this bureau implemented the adoption during 1960 of new "Regulations Governing Commercial Spraying of Lawns and Ornamental Shrubbery in Residential Areas with Highly Toxic Pesticides." Preliminary regulations were adopted by the State Board of Health on February 9 and originally took effect on May 1, 1960. After public hearings in Jacksonville on May 6 and again on June 15, the final revised regulations were adopted by the State Board of Health on June 19 and took effect on July 15, 1960.

The regulations set forth definition of terms, technical standards, qualifications for employers' certificates and employee permits, protective and precautionary public and personal health and safety requirements and techniques; and provide for written examinations, suspension and revocation procedures, penalties, public hearings, an Advisory Council and for lists of restricted and prohibited-use pesticides.

In January 1960 the Board of Health authorized the State Health Officer to set up an 11-man Toxic Pesticides Advisory Council to assist the Board in matters pertaining to the use of highly toxic pesticides. This Council is composed of Dr. J. R. Beckenbach, C. L. Brumback, M.D., W. G. Charles, R. Earl Dixon, James Griffin, Jr., William Harrison, Ted Kaplan, Sidney Kirkpatrick, Dr. Vincent E. Stewart, George M. Talbott

and Frank L. Holland. They represent The Florida Agricultural Experiment Station, Florida Agricultural Research Institute, Florida Citrus Growers Association, Florida Fruit and Vegetable Association, Horticultural Spraymen's Association, Florida Medical Association, Florida Nurserymen and Growers Association, Florida Pest Control Association, Florida Seedmen, State Department of Agriculture and Florida Turf-Grass Association.

The Council recommended regulations that were adopted by the Board which controls the use of highly toxic pesticides when used by commercial operators in residential areas. It is now working on regulations to control the sale and use of highly toxic pesticides by the home owner and by agriculture.

TABLE 68

SUMMARY OF LAWN SPRAYING REGULATIONS ADMINISTRATION AND ENFORCEMENT—1960

Employers' Certificates issued	870
Permits issued	2247
Examinations taken and passed	33
Examinations taken and failed	7
Complaints received	16
Violations reported	6
Suspensions or revocations	0

ENTOMOLOGICAL RESEARCH CENTER

MAURICE W. PROVOST, Ph.D.
Director

The year 1960 was characterized at the Entomological Research Center by building construction, new research grants and personnel movements. In the Fall, construction of the Control Research buildings was begun. The 2 buildings are financed jointly by the State Board of Health and the U. S. Public Health Service, through a research facilities grant. One building (64 x 36 feet) will house laboratories and offices, the other (92 x 40 feet) will be a warehouse and garage structure with a formulation laboratory. These are being built across the road from the main building on a 3-acre lot purchased 2 years ago. It is expected that the Control Research section will occupy its new quarters in April 1961.

In September Mr. Carlisle B. Rathburn obtained a National Institutes of Health research grant to study the physical features of mosquito aerosols or insecticidal "fogs." This study is aimed at improving the fogging operations, which are a major effort in most of the state's mosquito control districts. In October Dr. James L. Yount obtained an

NIH research grant to investigate the causes of biological lack of balance in Florida lakes, which produce midge nuisances. A major effort will be made to restore the normal balance by physical and chemical methods as a means of reducing the "blind mosquito" populations. The 2 research grants brought the total to 7 for the Entomological Research Center; these NIH grants brought $96,738 of federal funds to supplement the $154,480 state budget in 1960.

The ERC contributed 3 papers to the 11th International Congress of Entomology held in August. They were presented at Vienna by Drs. E. T. Nielsen and A. O. Lea. Dr. Nielsen took 5 months of leave to carry on special studies of mosquito swarming in Europe under a Carlsberg Foundation grant. Dr. A. O. Lea left in August for a 6 months study in European laboratories, on a USPHS post-doctoral fellowship. Further personnel complications were brought about by employee turnover in almost one-third of the positions on the staff after years of relative stability.

ETHOLOGY SECTION

Field Studies

Dr. E. T. Nielsen and Miss H. T. Nielsen spent the summer in Europe studying the swarming behavior of *Aedes caspius* and *A. cantans*. The former species had been formerly studied at low latitudes (in Iraq) by the Nielsens, so this summer's work at the high latitude of Denmark should reveal latitudinal effects if they exist. In Vero Beach, field behavioral observations were made of several important but little known mosquitoes: *Aedes infirmatus, A. fulvus-pallens, Psorophora ferox, Culex salinarius, C. nigripalpus, Mansonia perturbans,* and *Anopheles atropos*. Many new findings on mating, feeding and resting habits for these species were made, especially of *Psorophora ferox* and *Mansonia perturbans*.

Laboratory Studies

The temperature effect on pupal duration was studied further. No evidence of a difference between autogenous (those which can mature eggs without a blood meal) and anautogenous *Aedes taeniorhynchus* was found. Specimens from Key Largo were found to require 1 to 2 per cent longer to complete pupal development than those from Vero Beach. Toward the end of the year the pupation apparatus was modified to study the effect of fluctuating instead of constant temperatures.

The mosquito light-preference studies were continued with dual-choice and gradient-choice cages. Evaluation of these experiments led to the development of a multiple-choice light chamber, serious work with which was just beginning at the end of the year.

More experiments were carried out with the actograph (apparatus for measuring activity). This is a long range study with results still far from evaluation.

Artificial male swarming was further studied in the swarming chamber. This experimental work has uncovered many of the basic mechanisms in this habit of mosquitoes. They were reported upon at the Vienna International Congress, as were also Dr. Nielsen's extensive studies of migration.

ECOLOGY SECTION

The investigation of food habits among the fish invading a salt-marsh after flooding under natural conditions was completed during the year. Predation on mosquito larvae was very important in several species of fish. The relative roles of these "larvivorous" fish were established, along with the important question of what food they revert to when mosquito larvae are no longer there. Results of the important study have been compiled into a monograph, which has already been accepted for publication in an outstanding scientific journal. As this study was completed, another was begun to uncover the year-round dietary of 1 of the most important larvivorous fish of the salt-marsh, the killifish *Fundulus confluentus*. Also begun during the year was a study of fish movements into and over the intertidal areas.

The extensive investigation of mosquito sampling methods was pursued energetically during the year. The basic comparison between air-sampling (no attractant), light-trapping, sound-trapping and odor-trapping is being made on the basis of simultaneous use of all methods in the same area for long series of consecutive nights. The areas used in 1960 were Vero Beach, Marianna and Myakka. These sampling devices are also being compared and otherwise studied in a large (48-foot diameter) outdoor cage, where the collecting can be done within known populations of mosquitoes. More than 6000 collections were made during the year in these special sampling studies.

Special rearing pools for the salt-marsh mosquito, *Aedes taeniorhynchus*, were completed during the year and used at once. These involve a unique arrangement of artifical grassy swales, mostly 10 by 60 feet, so connected with reservoirs and tidal canals that the water table in each individual swale can be regulated, using a system of pumps, pipes and valves. When there are mosquito broods on the wing, the swales can be made very attractive for egg-laying. Once loaded with eggs, the swales are kept dewatered until experimental mosquitoes are needed, when simple flooding produces them in quantity. It is estimated that the 18 swales in this "nursery" have a capacity of some 100 million eggs. Several million mosquitoes were produced in 1960 for various experiments.

The midge biology studies in Winter Haven received a big boost when Dr. J. L. Yount was awarded an NIH research grant for the investigation. A special lakefront area was leased where ponds have been dug and various experimental studies are under way, including aeration of lakes. Many lakes in the area undergo and retain a summer oxygen stratification, resulting in a "double" lake, an upper well-aerated part and a lower poorly-aerated or even anaerobic part. Midge larvae have

a special ability to tolerate low-oxygen which their predators, fish especially, do not have. Increasing oxygen in the lower parts of these lakes should increase predation on larvae. A method of doing this will be tested in the coming year. Such aeration of lakes may have many applications in problems of waste disposal beyond the reduction of "blind mosquitoes."

Among the many projects undertaken by the meteorological or weather station at the Vero Beach laboratory was a study of temperatures within and just above small pools of water, to establish the mean temperature differences between the sites where the larval and adult mosquitoes actually are and the air temperatures as usually taken by weather stations. This is important because research continues to show the deciding role of temperatures at the breeding site in determining development rate, time of emergence, type of migratory exodus, length of migration and so on.

PHYSIOLOGY SECTION

The employment of a biochemist made it possible for the first time to delve into the basic problems of aging and energetics. Changes were undetectable in the quality of the amino acids in aging mosquitoes but certain quantitative changes were found. Employing some of the most recent techniques for fat determination, it was found that mosquitoes are able to synthesize reserves if given a sufficient diet and that the major portion of these reserves is triglycerides. These triglycerides are synthesized very rapidly in mosquitoes that are fed and are depleted entirely if the mosquitoes are starved.

Laboratory colonies of autogenous *Aedes taeniorhynchus* have been brought up to 13 and 18 generations, and efforts were made to isolate as pure a strain as possible. Monthly sampling was conducted from 1 particular area in Indian River County to observe the frequency of autogeny in a wild population throughout the year. The rate of autogeny remains high in the southern parts of Florida while it fluctuates in the Indian River County area. An autogenous strain of *Aedes aegypti* (which elicited some excitement at the Vienna congress when announced by Dr. Lea) is being maintained. The effect of various diets on the growth of larvae and the expression of autogeny was studied in *Aedes taeniorhynchus.*

Dr. A. O. Lea's European studies are concerned with the endocrinology of mosquitoes. The activity of the neurosecretory cells in the brain and of the corpora allata (a gland roughly corresponding to the pituitary in vertebrates) is at the heart of the autogeny problem. Dr. Lea is learning the several techniques involved in experimenting with these hormone producers.

Experiments were continued on the respiratory metabolism of individual *Aedes taeniorhynchus,* a feat made possible with the respirometer developed at this laboratory, and results were presented by Dr. Lea at the Vienna congress. The course of oxygen consumption was similar in autogenous and anautogenous females during the first 24 hours of adult life; thereafter, it depended on the degree of ovarian development. Anautogenous females showed no peaks in oxygen uptake, whereas pronounced peaks were encountered in autogenous females. The periods of increased oxygen consumption coincided with the periods of follicular growth and yolk deposition.

Dr. P. T. M. Lum continued his studies of the reproductive system in various species of mosquito. Comparisons were made on the anatomy and physiology of mating in mosquitoes common to the Vero Beach area. Striking differences were found in the rate of sexual maturity among males of the representative species and in the processes concerned with sperm transfer and insemination.

Observations were also made on the infection of mosquitoes with the fungus Coelomycetes. Two species of the fungus and a variety were found in abundance infecting larvae and adults of *Aedes taeniorhynchus* and *Psorophora howardii.* Studies were made on the pathogenicity of the fungus and its rate of development in the infected hosts.

CONTROL RESEARCH SECTION

The Control Research Section conducts investigations on all phases of mosquito control, with emphasis to date being upon the salt-marsh species. Control of sand flies also has received limited attention, and supervisory responsibility for research activities on control of midges or "blind mosquitoes" was given to this Section in 1960.

Control of Adult Mosquitoes: The project to evaluate thermal-aerosol apparatus for adult mosquito control which was started in 1958 was virtually completed for presently available makes of equipment during the past year. A few additional tests involving weather effects will need to be made in 1961.

This project has resulted in better knowledge of operating procedures to secure the maximum benefit from these machines in the state's mosquito control program. If and when newer kinds of equipment are available, it might be desirable and necessary to continue this project.

Several new insecticides were tested during the year as thermal aerosols against caged adult mosquitoes. Two of these, Ortho Dibrom and Bayer 29493, gave very satisfactory kills at relatively low dosages. When these compounds receive label approval for urban fogging, it is expected that they will become valuable as reserves against the time when the mosquito population might become resistant to malathion. This is important because malathion has since 1956 been the only insecticide available which safely and effectively controls DDT-resistant adult mosquitoes in urban areas. The new insecticides may also find wide contemporary use if they should prove to be competitive costwise.

Control of Mosquito Larvae: No new projects to develop mosquito larvicides were conducted during 1960. The granular Paris green developed at this laboratory during 1956-58 appears to be an adequate tool to control the larvae of most of the important mosquito species in Florida, except those of the genus *Mansonia*.

Preliminary laboratory tests in 1960 with granular Paris green to control larvae of *Mansonia perturbans* were not successful. It appears that some type of contact chemical will be required to control effectively the mosquito larvae in this group.

Results of other laboratory tests with granular Paris green to control larvae of *Culex nigripalpus*, a potential vector of encephalitis, were encouraging. Field tests against this species are planned for 1961.

Water Management Studies: The entomologist in charge of water management studies who resigned in November 1959 to accept a position offering better pay and an advancement potential was finally replaced in September 1960. It was necessary to raise the grade of this position, in order to secure the services of a suitable employee for this important project.

This work, after a delay of almost 1 year, is again progressing satisfactorily. The finding of *Mansonia* mosquito larvae in some of the impounded salt-marsh plots in the latter part of 1960 emphasizes the importance of this work from the public health standpoint. *Mansonia* mosquitoes are suspected vectors of Eastern equine encephalitis.

It is hoped that these and other fresh-water mosquitoes can be controlled in these impoundments through proper water management.

Preliminary investigations in 1960 showed that improved pastures for livestock present a potential threat to nearby communities, as well as to the livestock industry, through increased production of the Everglades mosquito, *Psorophora confinnis*. These observations strongly indicate that present land preparation and water management practices favor the increased mosquito production in these pastures. It is expected that a more detailed study of this problem will be made in cooperation with local cattlemen during 1961.

Sand Fly Studies: The project to evaluate the effects of mosquito source reduction practices on sand fly breeding begun in 1958 was terminated in the Spring of 1960.

Results of this project are very rewarding; they show that both filling and impounding of salt-marshes to control mosquitoes also greatly reduce the potential breeding sites for salt-marsh sand flies, the latter being confined to the water-edge peripheries of these marshes. It is estimated from these studies that potential sand fly production areas are reduced by 90 per cent or more in filled or impounded marshes. This means tremendous savings in cost of sand fly control as well as a much safer condition for preserving fishes and wildlife from the hazards of chemicals that may be necessary to control sand fly larvae.

CONTROL OF MIDGES

The branch research station at Winter Haven is concerned with the control of midges or "blind mosquitoes," which are produced in large numbers in the lakes of Central Florida.

Control of Midge Larvae: A program of screening new chemicals as larvicides was continued during 1960. Of 41 chemicals tested, only methyl trithion, Bayer 29493, Kepone and Genicide (xanthone) gave promising results. These compounds will be tested in field plots during 1961.

Ovicides: A number of chemicals were screened as ovicides during the year. Some of these gave encouraging results, but data are not adequate at this time to justify a detailed report.

Equipment Studies: Since midge larvae develop only in the soil at the bottom of lakes, it is felt that larvicides might be more effective if applied directly to the lake bottom. Several types of apparatus were designed and given preliminary trials in 1960. These all consisted of booms of various designs, which were dragged along the lake bottom by an outboard motor boat. While each of the apparatus tested showed promise, there was in each instance the problem of fouling of the equipment on rocks and other underwater obstructions. This work will be continued in 1961.

Adulticiding: Through the recommendation of the Midge Research Laboratory, the Polk County Arthropod Control commenced an adulticiding program to give temporary relief to local residents and businesses from the hordes of adult midges that emerge almost nightly from these lakes.

This program has been quite successful. It consists of fogging the lakeshore from boats and the adjacent streets by truck-mounted equipment. The malathion-lethane fogging formulation used in mosquito control also is used in this program.

MISCELLANEOUS ACTIVITIES

The outstanding project of the year in the taxonomy laboratory was the development and use of microscopic techniques for the determination of age and physiological states in mosquitoes. The pioneer work in this area of the Russian entomologist, Mrs. T. S. Detinova, was duplicated and adapted to Florida mosquitoes. It is now possible, by ovarain examination, not only to tell in what stage of development the ovaries are but also to determine how often the mosquito has laid eggs in the past. This ability to reconstruct the mosquito's egg-development history when added to the techniques for establishing mating history in both sexes constitutes an important advance in the analysis of brood histories and in the understanding of the selective operation of various trapping methods.

In the insectary, progress was made in the colonization of a considerable variety of mosquitoes, and special rearing methods were developed for each species. This work results also in increased knowledge of mosquito biology, e.g., development rate, larval diets, emergence patterns, mating habits, blood feeding behavior and so on. The following species were worked with more or less extensively: *Aedes taeniorhynchus, A. sollicitans, A. aegypti, A. triseriatus, A. atlanticus, A. infirmatus, A. fulvus-pallens, Psorophora ferox, P. ciliata, P. howardii, Culex mulrennani, C. salinarius, C. nigripalpus, C. quinquefasciatus, C. scimitar, Culiseta inornata, Wyeomyia vanduzeei, W. mitchellii, W. haynei, Uranotaenia lowii, Deinocerites cancer, Mansonia titillans, M. perturbans, Toxorhynchites rutilus, Orthopodomyia signifera, Anopheles atropos, A. bradleyi,* and the exotic *Opifex fuscus.* In no year previously had such an array of species (28) been worked with in the insectary.

Articles by staff members:

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Harrington, R. W., Jr., Harrington, E. S. Food of larval and young tarpon, *Megalops atlantica.* Copeia, 1960 (4): 311-19, 1960.

Lum, P. T. M. Gynandromorphism in *Aedes taeniorhynchus* (Wiedemann). Mosquito News, 20 (3): 314-15, 1960.

Nielsen, E. T. A note on stationary nets. Ecology, 41 (2): 375-76, 1960.

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Provost, M. W. The dispersal of *Aedes taeniorhynchus.* III. Study methods for migratory exodus. Mosquito News, 20 (2): 148-61, 1960.

Rogers, A. J., Carlisle, B. R. Airplane application of granular Paris green mosquito larvicide. Mosquito News, 20 (2): 105-110, 1960.

Rogers, A. J., Carlisle, B. R. Improved methods of formulating Paris green larvicide. Mosquito News, 20 (1): 11-14, 1960.

BUREAU OF DENTAL HEALTH

FLOYD H. DECAMP, D.D.S.
Director

The major objectives of this bureau are to assist Florida citizens, through a concentrated program of dental health education, to understand and utilize the known and accepted preventive dental health measures in the control of dental disease; to reduce the unnecessary and premature loss of teeth because of excessive dental decay and other destructive diseases within the oral cavity; to reduce the vast amount of loss of time by workers in industry because of dental disease and also to reduce the unnecessary absence of children from school due to dental diseases; to coordinate the efforts of teachers, administrators, public health workers, universities and others interested in dental health; to improve the dental and general health conditions of pupils in school and among the adult population; to aid the various counties to establish dental health services and remedial dental care for underprivileged children where needed; and to improve the general physical health of Florida citizens.

The staff of this bureau consisted of a director, assistant to the director, health educator and 2 full-time dentists who are operators of the 2 mobile dental units maintained by the State Board of Health. These mobile units operate in counties where there are either few or no local practicing dentists. Remedial dental care is furnished without charge to young children whose parents cannot afford care in private dental offices.

A highlight of 1960 was the statewide renewed interest and more active participation in fluoridation programs. This existed among civic groups, the dental profession and individuals. In addition to this, there was an upsurge in the interest on the part of county health department directors to secure funds to establish new remedial full-time dental clinics in counties where such services had not existed previously. This was supplemented by more active countywide participation in school dental health educational programs by health department staffs and others.

FLUORIDATION

A large number of cities and communities became more aware of the importance of the need for a broad educational program emphasizing the great value to be derived from fluoridation in the control of dental decay. These areas are already preparing for fluoridation in 1961.

In Ocala, where the fluoridation program had been in operation since 1956, a futile attempt was made by the anti-fluoridationists to have it discontinued. A referendum was won by better than a 2 to 1 vote to retain fluorides in the community water supply.

It should be noted that the Florida State Junior Chamber of Commerce has, and is still supporting and giving funds and statewide leadership to cities desiring to have fluoridation.

One of the great forces for education of the public is the press. The past year saw a great upswing in the number of state newspaper news releases and editorials on behalf of fluoridation. Among these was a special 2-page article on fluoridation in the ALL FLORIDA MAGAZINE, a Sunday supplement to 17 of Florida's largest daily newspapers, with a reading public of 2 and a half million.

DENTAL SCHOLARSHIP PROGRAM

The State Dental Scholarship Program was established in 1955 following enactment of a bill whereby the state gives financial assistance to 10 young, worthy, Florida residents wishing to study dentistry and who are unable to completely finance themselves through dental school. This is now showing promising results.

A scholarship recipient may receive $1000 a year for as many as 4 years. Upon graduation and obtaining Florida dental licensure, he repays his obligation to the state by practicing in an "area of need" (where there are few or no dentists) for 15 months for each $1000 he received.

In all, 60 scholarships have been granted with 1 cancellation prior to becoming effective. A summary of the 59 is as follows:

TABLE 69

Currently in dental school	31
Total number of graduates to date	25
Failed to complete studies	2
Undergraduate repaying 1-year loan	1
	59
Disposition of graduates:	
Placed in "areas of need"	13
In Armed Service fulfilling military obligation	5
Refused placement, but repaid loan in full	3
Refused placement, but repaying loan	1
Serving dental public health (Florida)	1
Serving internship (Washington, D. C.)	1
Served preceptorship 1-year and is to repay loan	1
	25

LACTOBACILLI LABORATORY SERVICE

This important phase of the over-all program is operated jointly with the Bureau of Laboratories. Initiated in mid-1955, it has consistently expanded in interest and benefits to the dentists of the state and their patients. The number of dentists participating in 1960 was less than that of 1959; however, the total number of saliva specimens submitted for analysis was 2794, the largest for any 1 year and exceeded the figure for 1959 by 799.

Dietary informational literature (booklets, pamphlets and new dietary lists, originated in this office), in the amount of 5546 pieces was distributed to the dentists to assist them in planning caries-control diets for their patients.

DENTAL PRECEPTORSHIP PROGRAM

The program, established in 1957, has proved its value by enabling county health departments to secure public health dentists to staff their clinics. It is also serving another purpose—that of bringing desirable, well-trained young dentists to the state. Almost all of the preceptorship dentists usually take the Florida State Board examinations and those who are successful in obtaining licensure remain in the state—either establishing a private practice, or remaining with the county health departments as public health dentists. Only 1 preceptor elected to return to his home state in 1960 to practice his profession.

During the preceptorship year, the dentist receives supervision from a local preceptorship committee, a dental advisor from this bureau and his local health officer.

An annual, 1-week, expense-paid, postgraduate course in pedodontics (dentistry for children) and dental public health is given for the benefit of the preceptors. The 1960 course was held at the central office, with 1 out-of-state specialist and local dentists serving as lecturers. In addition, the preceptorship dentists were also orientated to the many functions of, and facilities available to them through the State Board of Health.

Nine counties and the City of Jacksonville employed preceptors in 1960. These were: Alachua, Dade, Duval, Hillsborough, Lake, Broward, Pinellas, St. Johns and Volusia. Orange, Dade and Pinellas Counties employed a preceptor in addition to their regular public health dentists. Hillsborough County maintained 2 preceptors on its staff.

A large number of inquiries on the preceptorship program were received and from these 31 completed files were processed and presented to the Dental Preceptorship Committee for approval or disapproval. Twelve men were disapproved. Of the 19 dentists approved for preceptorship appointments, 14 were placed—12 with county health departments and 2 in this bureau. Seven of those approved were unable to accept assignments for various reasons, such as being called to military service, entering private practice or entering the dental public health field in other states.

The preceptorship year is from September 1 through August 31 of the following year, except in a few cases.

A summary of the dental activities of the various county health departments follows:

TABLE 70

No. school dental inspections	68,811
New clinic patients (ages 1-4 and 5-17)	8,854
Repeat patients (ages 1-4 and 5-17)	13,690
Fillings, all kinds	33,282
Extractions	2,534
Miscellaneous treatments	6,288
Films and slides shown	44
Approximate audience	2,035
Talks, school and civic groups	558
Literature distributed	30,130

MOBILE DENTAL CLINICS

The 2 mobile dental clinics maintained and operated by this bureau for the purpose of giving remedial dental care to underprivileged elementary school children in areas where there are few or no practicing dentists, gave the following services:

TABLE 71

School dental inspections	4174
New patients	1522
Repeat patients	1307
Fillings, all kinds	2745
Extractions	1594
Prophylaxis	1125
Misc. treatments	180
Films and filmstrips shown	15
Approximate audience	850
Talks given to school and civic groups	22
Literature distributed	2250

One clinic was in operation 11 months and the other clinic approximately 9 months. Together, 18 counties were visited and 58 schools serviced. The dentist operating Unit Number 2 entered private practice in June and it was late in September before the clinic was staffed again and in the field.

Both units are now staffed by preceptorship dentists, under the supervision of the 2 dentists in this bureau and by Preceptorship Committees from the county or district dental societies in the counties where the mobile units are assigned.

HEALTH EDUCATION

The 1960 report on the survey of dentistry by the American Council on Education reveals an already known need for dental care and a shocking need for increased dental health education. Despite the fact that dental disease is the number one chronic disease in the United States today, resources to combat this disease are not being used anywhere

near to the fullest extent to reduce the prevalence of dental disease. To reduce the incidence of this disease in years to come, parents and educators must be made aware of, and encouraged to use, the preventive measures that are known to reduce the great need of restoration and salvage work on the teeth. If this is to transpire, the importance of developing and coordinating programs of education cannot be underestimated.

In keeping with the need of emphasis on dental health education, a health educator has been employed for the past 11 years by this bureau. Her chief duties in 1960 were concerned with the following activities:

1. Consultation to state, county and local health department personnel in the development and continuation of the dental health aspects of their respective programs.
2. Consultation to interested civic groups in local communities helping them find financial resources to establish local programs to give corrective dental care to underprivileged elementary grade children and emergency care to underprivileged high school students.
3. Planning with state and county boards of public instruction, for increased health education of the elementary school child with emphasis on dental disease.
4. Participation in education programs for teachers and summer health workshop courses for health coordinators and teachers.
5. Visitations to county health department dental clinics for orientation of the preceptorship dentist as to the importance of the health education aspects of his dental program as well as the availability of health education materials to use in all phases of his work.
6. Teaching once a semester in college and university health classes to faculty and students presenting scientifically sound dental health facts and information on the availability of resources of approved dental health teaching materials.
7. Working with local sponsors of community fluoridation programs on community dental health educational programs.
8. Preplanning with health department and school personnel for visits of the state mobile dental clinics in local communities.

Approximately 60,000 pieces of American Dental Association approved materials and 50,000 pieces of mimeograph materials were distributed. The local dental societies have spent several thousand dollars in supplying their own schools and health departments with new dental health education materials this year. From the interest shown by the local school administrators, it may be that county boards of public instruction will follow a similar pattern and designate a portion of their funds for dental audio-visual aids and other materials for the coming school year.

This bureau continues to act as a resource for material, consultant services and participation in a number of the science fairs.

SUMMER DENTAL STUDENTS

During the summer of 1960, this bureau utilized the services of 2 dental students for a period of approximately 3 months. One student was a freshman and the other was a sophomore.

Salaries were paid from funds budgeted for this purpose. This proved to be a valuable service to the student and this bureau. The students familiarized themselves with the laboratory techniques used in all types of water analysis (especially for fluoride content). They became familiar with the various phases of the lactobacilli program. They had an opportunity for chairside observation of the dental procedures used in the City of Jacksonville Dental Clinic. Also, they had an opportunity to work with dental audio-visual aids and dental health educational materials.

POSTGRADUATE TRAINING

This bureau recommended 1 public health dentist for a scholastic year's training at the University of Michigan School of Public Health, beginning in the fall of 1960.

MONITORING OF DENTAL X-RAY MACHINES

The Division of Radiological and Occupational Health during 1960, cooperated with the East Coast District Dental Society, West Coast District Dental Society, the Northeast District Dental Society and this bureau in initiating a program of monitoring x-ray machines in the offices of private dentists.

PILOT SCHOOL DENTAL PROGRAM

Major emphasis in this project was centered in the Miami area. Here 6 schools are participating in an intensive dental inspection and educational program. The East Coast District Dental Society participating in this program furnished voluntary dental manpower to conduct dental inspections. They also participated financially, having budgeted $2000 in 1960 to be used for dental health educational materials in the Dade County elementary school dental health program.

EXPANSION OF DENTAL CLINICS

During the year of 1960, 5 additional counties established dental clinics. Two of these clinics were placed in newly built county public health centers financed in part by the Hill-Burton funds. These clinics, in Seminole and Santa Rosa Counties, are not yet staffed but new dental equipment has been installed.

Putnam County is installing a dental clinic at the county health department and will be staffed with a full-time preceptorship dentist beginning about June 1961. Volusia County expanded its program by establishing a third dental clinic in New Smyrna Beach. One dentist staffs all 3 clinics. Polk County, for the first time, hired a full-time dental preceptorship dentist to staff their dental clinic which is located in the county health department.

By the end of 1960, the various county health departments maintained a total of 22 fixed dental clinics and 2 mobile dental units. The Duval County Health Department had purchased a new mobile dental unit and completely furnished it with new dental equipment. Improvement in dental equipment in several areas has been made by financial grants of considerable amounts of money by interested local civic groups. Chiefly among these local organizations are the Pilot Clubs in Broward and Escambia Counties.

DENTAL INSPECTIONS

Approximately 20,000 dental inspections among elementary school children were done exclusive of those by full-time public health dentists. They were made by the dentists in various local communities who volunteered their services. These were all accompanied by the dental health educational programs.

OTHER ACTIVITIES

The director of the Bureau of Dental Health was appointed to represent the Florida State Dental Society, the Florida Branch of the Society of Dentistry for Children and the State Board of Health at the White House Conference on Children and Youth in March 1960.

The Florida State Dental Society has contributed in a great many ways to the activities of this bureau during the year. It has for a number of years appointed a 5-member Advisory Committee to the bureau. The committee is composed of 1 member from each of the 5 district dental societies and consists of the following: William O. Shumpert, D.D.S., Chairman, East Coast District, Ft. Lauderdale; Charles J. Hester, D.D.S., Northeast District, Jacksonville; Edward W. Lusk, D.D.S., West Coast District, Tampa; M. L. Miers, Jr., D.D.S., Northwest District, Tallahassee; and Neil G. Powell, D.D.S., Central District, Orlando.

The bureau is also cooperating with a committee appointed by the dental society to set up plans for providing some type of dental services for the medically and dentally indigent patients who are aged or chronically ill. During the latter part of 1960, initial plans were established to make extensive dental inspections in homes for the aged and chronically ill.

BUREAU OF FINANCE AND ACCOUNTS

FRED B. RAGLAND, B.S.
Director

PAUL R. TIDWELL, B.B.A.
Assistant Director

The major functions carried out by this bureau include: accounting, budgeting, purchasing, property control, duplicating services, mail, shipping, receiving, automobile control and assignment and buildings and grounds maintenance. The business or financial management requires close working relationship with the State Board of Health program directors in planning maximum utilization of funds that have been provided. This means sound budget preparation of the various health programs designed to cover a future period of time. Once the funds are provided and properly budgeted, then a logical system of accounting for these funds and issuance of reports concerning their expenditure is necessary. This, along with dissemination of proper budget control information is accomplished by this bureau. Sometimes this becomes quite involved due to the complexity of the various sources of funds: federal, state, county, private, etc. Each of these sources bears its own set of rules, laws and regulations as to the administration of expenditure of the funds.

The fiscal year ended June 30, 1960, was the first year of the 1959-61 state biennium for which the 1959 Legislature made available to the agency state funds through the General Appropriations Act. These appropriations were generally based upon maintaining present programs at the same level with no additional funds for new programs or for expansion.

Comparing program expenditures for fiscal year 1960 with the previous fiscal year, it is noted that the expenditure pattern was generally consistent. Overall, approximately 16 and one-half million dollars was spent. In two instances there was notable increase. The hospitalization program increased about one million dollars to a little over three million dollars for 1960 as a result of federal financial participation, and the county health departments increased over a half million dollars to seven million three hundred thousand dollars for 1960, due to more funds from local sources.

During the year continued study was given to the assignment and use of state automobiles. At the close of the fiscal year, June 30, 1960, the number of state automobiles owned was 74. These were driven approximately 1,150,000 miles during the year in carrying out travel responsibilities. In addition, the agency owned 39 trucks or special purpose vehicles; such as, mobile tuberculosis, dental and engineering laboratories. These units traveled approximately 325,000 miles during the year. Assignment and use of all vehicles is continually reviewed to insure that they are used in the most effective and economical manner in carrying out the agency's travel responsibilities. During 1960, old automobiles were traded and 19 new units were acquired.

The 1959 Legislature amended Chapter 500 of the Florida Statutes, assigning certain responsibilities to the State Board of Health for drugs, devices and cosmetics. The effective date of these responsibilities was placed at January 15, 1961, however during 1960 the agency did plan toward putting this program into effect. Application forms for registration of drugs, devices and cosmetics products were prepared and widely distributed to manufacturers, distributors and proprietors for registration for the period January 15-June 30, 1961. A number of these applications were returned and processed, and up to December 31, 1960, the amount collected by the agency for such registration fees was $15,365.

During the year the State Health Officer appointed an agency budget committee, consisting of the director of this bureau and the 2 Assistant State Health Officers. The main activity of this committee during 1960 was to receive from the various operating program directors their needs for funds for the next biennium. The work in this connection was undertaken beginning in June and in August the committee made recommendations to the State Health Officer and the Board. After the Board had approved in general terms the amounts to be included in the agency's 1961 Legislative budget report, this bureau coordinated and prepared in final form the agency's legislative budget, setting forth the financial needs for operations for the period July 1, 1961 to June 30, 1963, the total amount of which was almost fifty million dollars. There was also developed and prepared a legislative budget for buildings and construction needs for the same period in an amount of almost 2 million dollars. These documents, as required by law, were submitted to the Budget Director by November 15, 1960. These legislative budget reports will be acted upon not only by the State Budget Commission, but by the 1961 Session of the Legislature. The actual data required in the reports is most comprehensive and will be useful for planning purposes in the immediate 2 years ahead.

PURCHASING AND PROPERTY

The purchasing section carries out the responsibility of the agency's need for supplies, equipment and services. Purchases made are subject to rules and regulations issued by the State Purchasing Commission, such as obtaining bids, advertising for bids under certain conditions, printing regulations, etc. The property division of this section carries out the responsibility of recording, marking and inventorying of all property purchased (desks, chairs, automobiles, etc.). The State Statutes prescribe certain records which must be maintained, and the frequency of physical inventories.

The bureaus and divisions of the agency referred 2320 purchase requisitions to the office of the purchasing agent for equipment, supplies and services for the year 1960. In processing these requisitions, the purchasing office issued 3191 separate purchase orders to the various vendors and suppliers and the total amount of these combined purchase orders was approximately $965,000. County health departments normally

handle purchases locally within the organizational framework of the local department, however they must conform to the State Statutes by obtaining bids and advertising for bids as required, and also follow good business practices in procuring needs through competitive bids. The purchasing agent at the State Board of Health assists the county health departments wherever possible with their purchasing requirements.

Property Control

Considerable emphasis and attention was given Property Control and Accountability responsibilities during the year 1960. Beginning in January certain definite steps were taken to achieve current status of the agency's tangible property records in accordance with the rules and regulations as prescribed by the State Auditor. The property section was re-staffed with a property clerk and special assignments were given to others in order that vitally needed assistance could be provided in analyzing, planning, reorganizing and actually accomplishing the work necessary to bring the property records up-to-date. As a result, all state-level locations, including headquarters and non-headquarters, were up-to-date as of June 30, 1960, and complete with all records processed on IBM data cards from which inventory listings, including summary dollar totals are readily available. In conjunction with this data, a manual of Property Control and Accountability for use by all state-level locations was prepared and distributed. This manual contains the necessary instructions, forms and procedures to obtain the cooperation of the responsible persons at the various locations for the maintenance of an accurate and efficient system of Property Control and Accountability in strict adherence to prescribed regulations.

In addition to current records of tangible property, all other property was reviewed and re-evaluated primarily for insurance purposes and a "Plant Ledger" prepared. The June 30, 1960, valuations are as follows:

Real Property	$2,614,100
Furniture & Equipment (Tangible)	674,610
Automotive Equipment & Trailers	219,890
Books and Films	211,064
TOTAL	$3,719,664

As described above, this ledger is supported by detailed records and will be maintained on a current basis by standard operating procedures.

INSURANCE

Fire insurance on buildings and contents is carried in the State Fire Insurance Fund under the supervision of the State Fire Insurance Commissioner. Coverage on boilers and heating equipment is carried in a master policy supervised in the office of the State Fire Insurance Commissioner. Our agency protects scientific equipment in various mobile laboratories by a "Floater" or "Transportation" policy. Automobiles,

trucks and other special-purpose motor vehicles owned by the State Board of Health are covered by a fleet policy to include public liability, property damage, fire, theft and comprehensive. The agency acts as self-insurer for collision damage.

In 1960 claims totaling $604 were paid by the State Board of Health for damage to other vehicles. The insurer also honored comprehensive claims (thefts, glass breakage) in the amount of $149. State Board of Health owned vehicles were damaged by others and claims were received in the amount of $2541. Operating funds in the amount of $721 were spent for collision damages of state-owned automobiles.

Also during 1960, the agency received $1812 as insurance claims under coverage afforded by the boiler insurance policy.

Other miscellaneous insurance coverage is routinely carried for appropriate protection of property and other liability.

BUILDINGS AND GROUNDS

The responsibility for maintenance of buildings and grounds becomes increasingly important with the growth of the agency. At present there are approximately 85,000 square feet of building space which must be kept clean and in good repair. The buildings differ in age from ancient to modern and create different problems in each.

The superintendent of buildings and grounds, and his maintenance staff, is capable of performing the general maintenance needs of the agency. This is done most efficiently and economically. During 1960, continued emphasis was placed upon proper maintenance of the expensive mechanical part of the plant, including boilers, compressors, cooling towers and air handling units.

Approximately 850 work requisitions were handled by the Maintenance Department. Some of the major accomplishments of the department included repairing and re-roofing the Julia Street building, replacement of cooling tower on the Hanson Building, exterior water-proofing, modernized lighting and overhauling parts of the heating system.

A security force, directly responsible to the superintendent of buildings and grounds, is on duty at all times except regular office hours. Security officers are responsible for routine check on all mechanical equipment, entrances, vehicles left on the parking lot, and general protection of all property and equipment.

SHIPPING AND RECEIVING

This section is directly responsible to the superintendent of buildings and grounds. The bulk of shipping includes drugs, supplies and forms to county health departments, and containers and laboratory supplies to regional laboratories and State Tuberculosis hospitals. This section receives all incoming shipments and completes receiving reports for such

shipments. The section also aids the central laboratory in the preparation of laboratory mailing containers.

DUPLICATING

The Duplicating Department continues to operate efficiently and economically, being a valuable asset to the organization. No new equipment was added during the year. The section continues to record job numbers, total runs, number of forms reproduced and cost.

During the year each job requested of the department was by separate written requisition. There were 1985 requisitions for mimeograph, multilith or multigraph services. These jobs required 6252 separate forms when reproduced, the total impressions were 7,273,359. This is a noteworthy accomplishment, in view of 1 position being vacant several months during the year. A re-evaluation of the position and the work performed has enabled the position to be properly classified and obtain qualified personnel.

DITTO ROOM

The addressograph files increased during the year by about 2000 plates, making a total of approximately 30,000. The *Florida Health Notes* file, totaling 14,000 plates, was revised by sending cards to addressees asking if they cared to continue receiving the publication. The total was reduced by about 4000, however these are being replaced by new names sent in by the 67 county health departments. The addressograph operator assists and gives advice to any workers using the ditto, robotyper or multiple copy machines.

FISCAL SECTION

The financial transactions of the State Board of Health for the fiscal year ended June 30, 1960 as reflected by the records of the bureau are presented in a condensed form in Tables 72, 73, and 74.

A detailed financial report for the fiscal year ended June 30, 1960, has been prepared and distributed to the Governor, members of the State Board of Health, and all bureaus, divisions and county health departments.

The funds received (or appropriated) for the fiscal year ended June 30, 1960, were from the following sources:

State Appropriations and Funds	$ 8,744,041.13	49%
From Local Agencies for County Health Departments	5,267,681.95	30%
From Federal Grants-in-Aid	1,387,438.71	8%
From Research Grants	367,793.43	2%
From Hospital Service for Indigents:		
Local Sources*	254,456.84	1%
State Welfare Board	1,692,727.48	10%
TOTAL	$17,714,139.54	100%

*These funds deposited with and disbursed through the State Treasury. Does not include $2,966,460 disbursed locally.

The operating and capital expenditures by the State Board of Health were for:

Personal Services (Salaries and Professional Fees)	$ 8,819,198.32	53%
Contractural Services (Repairs, Utilities, Travel Expense, Hospital Program)	4,724,696.98	28%
Materials and Supplies (Office, Medical, Laboratory, Mosquito Control, Educational)	$ 1,089,649.13	7%
Current Charges (Rents, Insurance, Merit System Costs, Registrar Fees)	248,538.30	2%
Capital Outlays (Equipment and Fixed Assets)	274,931.07	2%
Grants to Counties and Mosquito Control Districts	1,227,696.79	7%
Miscellaneous (Education Aids and Subsidies)	165,530.09	1%
TOTAL	$16,550,240.68	100%

In addition to funds reported in the annual financial report and summarized above, certain other funds and services were made available by the U. S. Public Health Service to the activities of the Board but were not paid directly to the State Board of Health. They include:

Value of Public Health Service personnel on loan to the Board in Preventable Diseases Programs.....$133,750.80

Fiscal operation followed a budget plan of 139 departmental budgets. These budgets were occasionally revised to meet changing situations.

TABLE 72

SUMMARY OF RECEIPTS AND DISBURSEMENTS AND BALANCES FOR THE FISCAL YEAR ENDED JUNE 30, 1960

RECEIPTS

FROM STATE FUNDS

From State Appropriations—Operations:	
General Public Health	$ 2,132,020.00
Mental Health	510,289.00
Cancer Control	60,815.00
Consolidated Mosquito Control	1,994,107.00
County Health Units	1,660,000.00
Medical Students Scholarships	40,000.00
Dental Students Scholarships	40,000.00
Hospital Service for Indigents	1,810,520.00
Mental Health Council	160,135.00
Air Pollution	50,680.00

TABLE 72 (Continued)

Purchase of Salk Vaccine	150,000.00
From State Appropriation—Capital Improvements	
Purchase of Land	15,000.00
Other:	
Medical Laboratory Control	1,025.00
Bedding Inspection Administration	98,180.21
Advisory Hospital Council	1,420.00
Drug Store Inspection	19,849.92
Total State Funds	$ 8,744,041.13
FROM FEDERAL GRANT-IN-AID	
Public Health Service:	
General Health	$ 393,370.00
Venereal Disease	67,522.99
Tuberculosis Control	91,122.11
Heart Disease	77,501.00
Cancer Control	56,829.00
Mental Health	119,303.99
Water Pollution	61,040.00
Children's Bureau:	
Maternal and Child Health	520,749.62
TOTAL FEDERAL GRANT-IN-AID	$ 1,387,438.71
FROM GRANTS AND DONATIONS	$ 367,793.43
FROM LOCAL AGENCIES FOR COUNTY HEALTH UNITS	$ 5,267,681.95
FROM HOSPITAL SERVICE FOR INDIGENTS	
Local Sources	$ 254,456.84
State Welfare Board	1,692,727.48
TOTAL FROM HOSPITAL SERVICE FOR INDIGENTS	$ 1,947,184.32
TOTAL RECEIPTS	$17,714,139.54
Balance July 1, 1959, $4,039,088.41 (Less expired appropriations of $1,891,977.35)	$ 2,147,111.06
TOTAL RECEIPTS AND BALANCES	$19,861,250.60

DISBURSEMENTS

OPERATING EXPENSES	
Personal Services:	
Salaries	$ 8,677,076.26
Professional Fees and Consultant Services	142,122.06
Contractual Services:	
Travel Expense, including subsistence and lodging	1,078,953.99
Communication and Transportation of Things	236,136.86
Utilities	105,592.34
Repairs and Maintenance	79,689.86
General Printing and Reproduction Services	42,646.61
Hospital Care of the Indigent	3,087,326.97
Other Contractual Services	94,350.35

TABLE 72 (Continued)

Materials and Supplies:	
Bedding, Clothing and Other Textile Products	598.67
Building and Construction Materials and Supplies	7,951.39
Coal, Fuel Oil and Other Heating Supplies	12,239.47
Educational, Medical and Scientific Materials and Supplies	799,988.33
Food Products	8.55
Maintenance Materials and Supplies (Janitorial, etc.)	61,959.61
Motor Fuel and Lubricants	44,769.33
Office Materials and Supplies	156,879.67
Other Materials and Supplies	5,254.11
Current Charges:	
Insurance and Surety Bonds	51,534.34
Rental of Buildings and Equipment	105,638.64
Other Current Charges and Obligations	49,481.63
Merit System	41,883.69
TOTAL OPERATING EXPENSES	$14,882,082.73
CAPITAL EXPENSES	
Books	$ 5,043.87
Buildings and Fixed Equipment	20,210.99
Educational, Medical, and Scientific Equipment	61,119.15
Motor Vehicles—Passenger	51,030.61
Motor Vehicles—Other	437.49
Office Furniture and Equipment	116,213.38
Land	19,357.40
Other Structures and Improvements	1,518.18
TOTAL CAPITAL EXPENSES	$ 274,931.07
GRANTS, SUBSIDIES AND CONTRIBUTIONS	
Grants to Counties and Mosquito Control Districts	$ 1,227,696.79
Other Educational Aids and Subsidies	165,530.09
TOTAL GRANTS, SUBSIDIES AND CONTRIBUTIONS	$ 1,393,226.88
TOTAL PROGRAM EXPENSES	$16,550,240.68
NON-OPERATING DISBURSEMENTS	
Comptroller's 3% Fee Collection	$ 3,395.19
Transfers	709,796.00
Refunds	25,568.68
TOTAL NON-OPERATING DISBURSEMENTS	$ 738,759.87
TOTAL DISBURSEMENTS	$17,289,000.55
BALANCE JUNE 30, 1960	2,572,250.05
TOTAL DISBURSEMENTS AND BALANCE	$19,861,250.60

TABLE 73

SCHEDULE OF EXPENSES BY PUBLIC HEALTH PROGRAM ACTIVITY

Health Services to mothers, infants, preschool and school children	$ 2,890,270.00
Statewide Venereal Disease Control, Diagnosis and Referral of Infectious Venereal Disease Patients to Treatment Clinics—also Operation of Program	857,240.00
Mosquito and Pest Control Programs, Including Pest Control Law Enforcement	2,750,772.30
Indigent Hospitalization	3,099,049.67
Statewide Sanitary Engineering and Environment Sanitation	1,512,137.49
Statewide Tuberculosis Control, X-ray Survey and Follow-up Work	872,000.00
Statewide Cancer Control Program	444,500.00
Mental Health Program	1,043,580.00
Statewide Narcotic, Drug, Medical Practice Law Enforcement	137,451.45
Radiological and Occupational Health (Including Air Pollution)	106,461.09
Heart Disease Program	265,950.00
Polio Program	135,036.50
Other Health Programs and Administration	2,435,792.18
TOTAL EXPENSES	$16,550,240.68

SCHEDULE OF EXPENSES BY FUNCTIONAL ACTIVITY

General Public Health (to include general operating expenses and miscellaneous activities)	$ 1,048,831.41
Vital Statistics	204,433.62
Health Information	91,529.35
Sanitary Engineering	411,834.39
Entomology and Mosquito Control	2,017,236.88
Laboratories	608,411.24
Tuberculosis Control	180,052.09
Preventable Diseases (Excluding Tuberculosis)	318,920.70
Narcotics	107,030.89
Chronic Diseases	134,237.45
Mental Health	292,822.33
Maternal and Child Health	289,399.48
Hospital Service for the Indigent	3,099,049.67
Local Health Service	276,060.50
Polio Program	135,036.50
County Health Units	7,335,354.18
TOTAL EXPENSES	$16,550,240.68

TABLE 74

FUNDS RECEIVED BY COUNTY HEALTH UNITS FROM STATE BOARD OF HEALTH AND LOCAL SOURCES FOR THE FISCAL YEAR ENDED JUNE 30, 1960

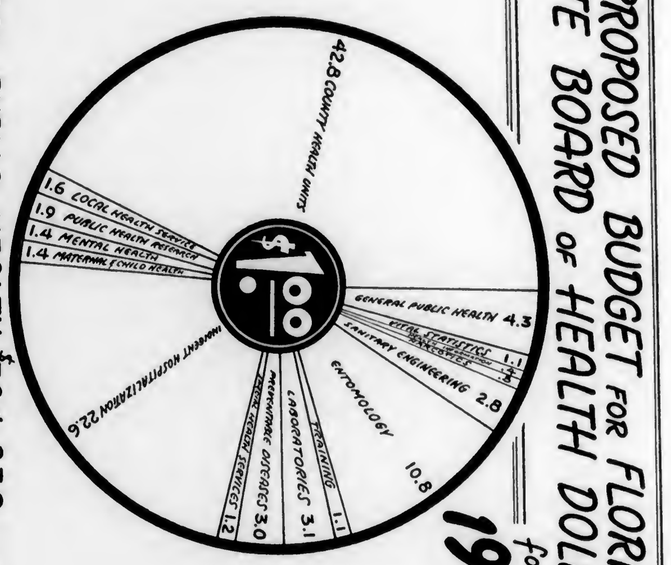
		STATE BOARD OF HEALTH					LOCAL FUNDS				
	Total Funds	Total	State	State Mental Health	Federal	Total	Board of County Commissioners	Board of Public Instruction	Cities	Fees and Miscellaneous
Alachua	$ 179,611	$ 58,339	$ 44,555	$ 11,510	$ 2,274	$ 121,272	$ 93,914	$ 13,200	$ 11,673	$ 2,485
Baker	24,980	14,584	10,004	4,580		10,396	10,283			113
Bay	95,974	53,249	29,794	23,455		42,725	42,081			644
Bradford	28,410	16,003	16,003			12,407	9,854		2,400	153
Brevard	181,545	32,460	27,170	5,290		149,085	121,763			27,322
Broward	281,962	91,769	63,934	24,520	3,315	190,193	186,090		1,720	2,383
Calhoun	20,535	10,068	10,068			10,467	10,400			67
Charlotte	33,907	11,105	11,105			22,802	22,629			173
Citrus	23,777	14,015	8,495	5,520		9,762	7,107			55
Clay	43,548	20,273	20,273			23,275	20,691	2,600	2,400	184
Clay Building Fund	9,400					9,400	9,400			
Collier	56,564	22,501	22,501			23,763	23,576			5,187
Columbia	39,866	19,555	19,555	5,300		20,311	20,045			266
Dade	1,390,418	241,121	132,036		78,876	1,149,297	1,060,237			89,060
DeSoto	26,749	16,372	11,092	30,209		10,377	8,425	1,750		202
Dixie	13,812	6,756	6,756	5,280		7,056	5,007	2,000		49
Duval	206,926	97,372	42,750	42,766	11,856	109,554	63,778		6,960	38,816
Escambia	293,741	84,342	54,113	21,267	8,962	209,399	118,049	6,000	58,500	26,850
Flagler	15,743	7,135	7,135			8,608	8,576			32
Franklin	23,985	8,779	7,399	1,380		15,206	14,883			323
Gadsden	68,562	35,884	30,604	5,280		32,678	27,537	3,275	1,108	758
Gilchrist	11,386	5,187	5,187			6,199	3,126	3,050		23
Glades	12,113	3,974	3,974			8,139	8,035			104
Gulf	28,496	13,291	13,291			15,205	12,074	3,000		131
Hamilton	18,294	9,977	9,977			8,317	7,979		275	63
Hardee	29,510	13,843	13,843			15,667	14,294		1,020	353
Hardee Building Fund	5,175					5,175	5,175			
Hendry	19,827	9,006	9,006			10,821	10,720			101
Hernando	13,337	9,043	9,043			4,294	2,492	1,265		537
Highlands	44,859	26,565	21,045	5,520		18,294	18,000			294
Highlands Building Fund	10,818					10,818	10,818			
Hillsborough	738,110	128,113	36,671	21,020	70,422	609,997	456,953			153,044
Hillsborough Building Fund	15,000					15,000				15,000
Holmes	28,771	15,510	15,510			13,261				61
Indian River	49,476	14,739	14,739			34,737	27,929	7,000	1,145	2,663
Jackson	66,358	36,169	24,030	4,780	7,359	30,189	26,308	3,000	600	281

TABLE 74 (Continued)

FUNDS RECEIVED BY COUNTY HEALTH UNITS FROM STATE BOARD OF HEALTH AND LOCAL SOURCES FOR THE FISCAL YEAR ENDED JUNE 30, 1960

	Total Funds	STATE BOARD OF HEALTH				LOCAL FUNDS				
		Total	State	State Mental Health	Federal	Total	Board of County Commissioners	Board of Public Instruction	Cities	Fees and Miscellaneous
Jefferson	$ 31,558	$ 10,084	$ 10,084	$.....	$.....	$ 21,474	$ 3,200	$ 3,200	$.....	$ 15,074
Lafayette	19,427	6,251	6,251	.....	.....	13,176	12,000	1,167	.....	9
Lake	95,152	36,274	36,274	.....	.....	58,878	56,523	.....	1,815	540
Lee	70,910	29,013	25,493	3,520	.....	41,897	41,334	.....	.....	563
Leon	155,601	68,162	41,408	21,320	5,434	87,439	66,131	7,765	5,000	8,543
Levy	25,857	12,879	12,879	.....	.....	12,978	8,418	4,500	.....	60
Liberty	14,837	5,909	5,909	.....	.....	8,928	8,920	.....	.....	8
Madison	30,052	15,934	15,934	.....	.....	14,118	13,944	.....	.....	174
Manatee	102,025	44,516	31,907	12,609	.....	57,509	52,746	.....	.....	4,763
Marion	63,206	33,527	28,727	4,800	.....	29,679	29,185	.....	.....	494
Martin	32,286	13,709	13,709	.....	.....	18,577	17,953	500	.....	124
Monroe	80,015	31,710	29,310	.....	2,400	48,305	33,073	6,000	5,650	3,582
Nassau	55,480	19,845	19,845	.....	.....	35,635	35,478	.....	.....	157
Okaloosa	49,317	25,269	22,998	2,271	.....	24,048	17,837	5,000	.....	1,211
Okeechobee	11,645	6,302	6,302	.....	.....	5,343	5,302	.....	.....	41
Orange	286,586	75,329	47,448	17,537	10,344	211,257	179,632	18,304	780	12,541
Osceola	29,342	14,086	14,086	.....	.....	15,256	12,817	2,200	.....	239
Palm Beach	351,121	93,368	50,699	21,147	21,522	257,753	169,092	25,130	34,030	29,501
Pasco	29,751	16,584	16,584	.....	.....	13,167	8,000	4,360	.....	807
Pinellas	663,167	113,104	79,742	26,237	7,125	550,063	436,282	.....	.....	113,781
Polk	342,880	100,848	60,217	28,346	12,285	242,032	205,277	16,875	7,200	12,680
Putnam	55,241	24,351	24,351	.....	.....	30,890	30,112	.....	.....	778
St. Lucie	71,486	42,781	25,451	17,330	.....	28,705	21,329	.....	4,500	2,876
Santa Rosa	45,866	21,219	21,219	.....	.....	24,647	16,030	8,400	.....	217
Sarasota	185,309	60,562	36,363	15,109	9,090	124,747	113,274	4,000	.....	7,473
Seminole	71,795	28,332	23,512	4,820	.....	43,463	18,248	7,258	.....	17,957
Sumter	20,035	11,877	11,877	.....	.....	8,158	3,872	3,750	.....	536
Suwannee	30,303	15,744	15,744	.....	.....	14,559	14,447	.....	.....	112
Taylor	22,637	12,965	12,965	.....	.....	9,672	8,750	800	.....	122
Union	15,272	9,729	9,729	.....	.....	5,543	5,500	.....	.....	43
Volusia	259,445	88,252	48,236	36,491	3,525	171,193	131,389	15,300	.....	24,504
Wakulla	14,767	9,615	9,615	.....	.....	5,152	5,000	.....	.....	152
Walton	34,987	16,749	16,749	.....	.....	18,238	8,160	7,000	2,870	208
Washington	25,707	13,650	13,650	.....	.....	12,057	11,953	.....	.....	104
County Health Units State at Large	63,075	63,075	63,075	.....	.....	.....	.....	.....	.....	.....
TOTALS	$7,607,685	$2,344,003	$1,660,000	$429,214	$254,789	$5,263,682	$4,295,636	$190,649	$149,646	$627,751

FIGURE 9



GENERAL PUBLIC HEALTH	$784,830 — 4.3¢
VITAL STATISTICS	206,664 — 1.1
HEALTH INFORMATION	85,380 — .4
NARCOTICS	101,860 — .5
SANITARY ENGINEERING	494,684 — 2.8
ENTOMOLOGY	1,999,925 — 10.8
TRAINING	212,513 — 1.1
LABORATORIES	571,700 — 3.1
PREVENTABLE DISEASES	563,620 — 3.0
SPECIAL HEALTH SERVICES	220,591 — 1.2
INDIGENT HOSPITALIZATION	4,210,000 — 22.6
MATERNAL AND CHILD HEALTH	266,039 — 1.4
MENTAL HEALTH	265,615 — 1.4
PUBLIC HEALTH RESEARCH	366,138 — 1.9
LOCAL HEALTH SERVICE	295,041 — 1.6
COUNTY HEALTH UNITS	7,953,098 — 42.8
TOTAL	**$18,597,698 ONE DOLLAR**